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(54) **ATOMIZATION DEVICE AND ATOMIZATION ASSEMBLY THEREOF**

(57) This application provides an atomization device and an atomization assembly (10) thereof. The atomization assembly (10) includes a housing (110), an atomization module (120), and a sliding member (130). The atomization module (120) is disposed inside the housing (110), and an e-liquid guide hole (1201) is formed in a side wall of the atomization module (120). A storage cavity (1101) and a buffer cavity (1102) are arranged in the housing (110); and the storage cavity (1101) is used for storing an atomization substrate, and the buffer cavity (1102) is in communication with the e-liquid guide hole (1201). The sliding member (130) is slidably arranged in the housing (110) and is movable between an open position and a closed position, so as to selectively connect or separate the storage cavity (1101) and/or from the buffer cavity (1102). In this application, a sliding member (130) is arranged in the housing (110) to control the connection or blocking between the storage cavity (1101) and the buffer cavity (1102), thereby opening or closing the channel for the atomization substrate in the storage cavity (1101) to enter the atomization module (120).

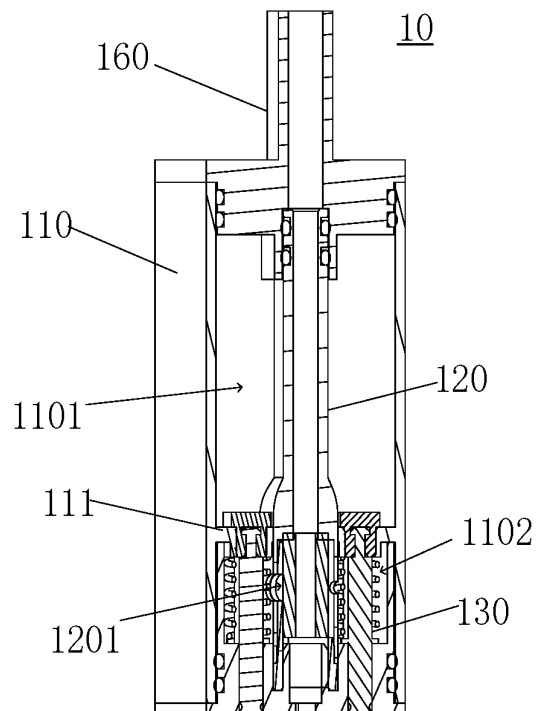


FIG. 1

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Description

TECHNICAL FIELD

[0001] This application relates to the field of atomization technology, and specifically to an atomization device and an atomization assembly thereof.

BACKGROUND

[0002] An atomization device refers to a device that converts stored atomizable medium into aerosol through methods such as heating or ultrasonication. Current atomization devices are usually equipped with an atomization module and a storage cavity for holding the atomization substrate. The atomization substrate in the storage cavity can enter the atomization module, and is heated and atomized to form aerosol. The aerosol mixes with air entering the atomization module and then flows out of an atomization cavity for a user to inhale.

[0003] Currently, in most atomization devices on the market, an e-liquid guide hole of the atomization module is in communication with the storage cavity, resulting in the atomization module being immersed in the atomization substrate for a long time. This causes an e-liquid guide body in the atomization module to remain in a saturated state for a long time, which easily leads to leakage of the atomization substrate through an atomization channel of the atomization module, resulting in contamination. Moreover, this leakage affects the taste of the aerosol generated by atomization. In addition, the leaked atomization substrate may even be inhaled into the user's mouth during use, bringing extremely poor experience to consumers. Therefore, there is an urgent need in the industry for a new atomization assembly structure to address the problem of storage and e-liquid leakage.

SUMMARY

[0004] The main technical problem solved by this application is to provide an atomization device and its atomization assembly to address the issue of oil leakage during storage.

[0005] A first aspect of embodiments of this application provides an atomization assembly. The atomization assembly includes a housing, an atomization module, and a sliding member. The atomization module is disposed inside the housing, and an e-liquid guide hole is formed in a side wall of the atomization module. A storage cavity and a buffer cavity are arranged in the housing; and the storage cavity is used for storing an atomization substrate, and the buffer cavity is in communication with the e-liquid guide hole. The sliding member is slidably arranged in the housing and is movable between an open position and a closed position, so as to selectively connect or separate the storage cavity and or from the buffer cavity.

[0006] According to an embodiment of this application, the housing is provided with a partition plate having a through-hole. The partition plate divides space inside the housing into the storage cavity and the buffer cavity, which are communicated through the through-hole. The sliding member is inserted through the through-hole, and an e-liquid blocking part is provided at one end of the sliding member close to the storage cavity. When the sliding member is in the closed position, the e-liquid blocking part seals the through-hole, to separate the storage cavity from the buffer cavity.

[0007] According to an embodiment of this application, the sliding member includes a linkage member. The linkage member includes a main body part, and a first end part and a second end part located at both ends of the main body part. The first end part is connected to the e-liquid blocking part. The atomization assembly further includes a base, and the buffer cavity is located between the base and the housing. The second end part is at least partially inserted into the base and is slidable relative to the base, so that under driving by an external force, the linkage member is driven to slide along the base, so as to drive the e-liquid blocking part away from the through-hole.

[0008] According to an embodiment of this application, the atomization assembly further includes an elastic member disposed in the buffer cavity. Both ends of the elastic member are respectively connected to the sliding member and the housing. The elastic member is used to provide an elastic restoring force that drives the sliding member to move from the open position to the closed position.

[0009] According to an embodiment of this application, the base is provided with a through docking channel. The second end part of the linkage member is slidably disposed in the docking channel, and the second end part is able to be pushed to move toward the buffer cavity.

[0010] According to an embodiment of this application, the e-liquid blocking part and the first end part are detachably connected.

[0011] According to an embodiment of this application, a protruding part is provided between the main body part and the second end part of the linkage member. The elastic member is compressed between the protruding part and the housing to apply a force to the protruding part that is away from the housing, so that the e-liquid blocking part seals the through-hole.

[0012] According to an embodiment of this application, the sliding member is provided with a hollow channel, as well as an e-liquid inlet hole and an e-liquid outlet hole that are in communication with the hollow channel. When the sliding member is in the open position, the e-liquid inlet hole is located in the storage cavity and the e-liquid outlet hole is located in the buffer cavity, so that the atomization substrate in the storage cavity is able to reach the atomization module through the hollow channel.

[0013] A second aspect of embodiments of this application further provides an atomization device, which

includes the atomization assembly described in any one of the above embodiments. The atomization device further includes a battery assembly, and the battery assembly is electrically connected to the atomization assembly to supply power to the atomization assembly.

[0014] According to an embodiment of this application, the battery assembly is convexly provided with an abutting part. When the atomization assembly is connected to the battery assembly, the abutting part abuts against the sliding member, so that the sliding member is in the open position.

[0015] The atomization device and its atomization assembly provided by this application are configured by arranging a sliding member in the housing to control the connection or blocking between the storage cavity and the buffer cavity, thereby opening or closing the channel for the atomization substrate in the storage cavity to enter the atomization module, and further addressing the issue of oil leakage of the product during storage.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] To more clearly illustrate the technical solutions in embodiments of this application, the drawings required for describing the embodiments will be briefly introduced below. Clearly, the drawings in the following description are only some embodiments of this application. For those of ordinary skill in the art, other drawings can also be obtained based on these drawings without exerting creative efforts.

FIG. 1 is an axial cross-sectional view of an embodiment of an atomization assembly of this application;

FIG. 2 is a cross-sectional schematic diagram of the atomization assembly shown in FIG. 1 when a sliding member is in a closed position;

FIG. 3 is a cross-sectional schematic diagram of the atomization assembly shown in FIG. 1 when the sliding member is in an open position;

FIG. 4 is a cross-sectional schematic diagram of a housing of the atomization assembly shown in FIG. 1;

FIG. 5 is a schematic structural diagram of a linkage member of the atomization assembly shown in FIG. 1;

FIG. 6 is a cross-sectional schematic diagram of a base of the atomization assembly shown in FIG. 1;

FIG. 7 is an axial cross-sectional view of another embodiment of the atomization assembly of this application;

FIG. 8 is a cross-sectional schematic diagram of the

atomization assembly shown in FIG. 7 when the sliding member is in the closed position;

FIG. 9 is a cross-sectional schematic diagram of the atomization assembly shown in FIG. 7 when the sliding member is in the open position;

FIG. 10 is a schematic structural diagram of the linkage member of the atomization assembly shown in FIG. 7;

FIG. 11 is a cross-sectional schematic diagram of an embodiment of an atomization device of this application;

FIG. 12 is a cross-sectional schematic diagram of the atomization device shown in FIG. 11 from another angle;

FIG. 13 is a cross-sectional schematic diagram of a fixing bracket of the atomization device shown in FIG. 11.

DETAILED DESCRIPTION

[0017] This application will be further described in detail below with reference to the accompanying drawings and embodiments. It should be particularly pointed out that the following embodiments are only used to illustrate this application, but do not limit the scope of this application. Similarly, the following embodiments are only part of the embodiments of this application, not all of them. All other embodiments obtained by those of ordinary skill in the art without creative efforts shall fall within the protection scope of this application.

[0018] The terms "first", "second", and "third" in the embodiments of this application are only used for descriptive purposes, and shall not be understood as indicating or implying relative importance or implicitly indicating the number of technical features indicated. Therefore, the features defined with "first", "second", and "third" may explicitly or implicitly include at least one such feature. In the description of this application, the meaning of "plurality" is at least two, such as two or three, unless otherwise clearly and specifically defined. All directional indications (such as up, down, left, right, front, rear...) in the embodiments of this application are only used to explain the relative positional relationship and movement status between components under a specific posture (as shown in the accompanying drawings). If the specific posture changes, the directional indications will also change accordingly. The terms "include" and "have" in the embodiments of this application and any variations thereof are intended to cover non-exclusive inclusion. For example, a process, method, system, product, or device that includes a series of steps or units is not limited to the listed steps or units, but optionally further includes unlisted steps or units, or

optionally further includes other steps or components inherent to the process, method, product, or device.

[0019] The reference to "an embodiment" herein means that a specific feature, structure, or characteristic described in combination with the embodiment may be included in at least one embodiment of this application. The appearance of the phrase at various positions in the specification does not necessarily refer to the same embodiment, nor is it an independent or alternative embodiment that is mutually exclusive with other embodiments. It is explicitly and implicitly understood by those skilled in the art that the embodiments described herein may be combined with other embodiments.

[0020] An embodiment of this application provides an atomization assembly 10. Please refer to FIG. 1 to FIG. 3 together. FIG. 1 is an axial cross-sectional view of an embodiment of the atomization assembly of this application, FIG. 2 is a cross-sectional schematic diagram of the atomization assembly shown in FIG. 1 when a sliding member is in a closed position, and FIG. 3 is a cross-sectional schematic diagram of the atomization assembly shown in FIG. 1 when the sliding member is in an open position. The atomization assembly 10 includes a housing 110, an atomization module 120, and a sliding member 130. Specifically, the atomization module 120 is disposed in the housing 110, and an e-liquid guide hole 1201 is formed in a side wall thereof. A storage cavity 1101 and a buffer cavity 1102 are arranged in the housing 110; and the storage cavity 1101 is used for storing an atomization substrate, and the buffer cavity 1102 is in communication with the e-liquid guide hole 1201. The sliding member 130 is slidably arranged in the housing 110 and is movable between the open position and the closed position to connect or separate the storage cavity 1101 and or from the buffer cavity 1102. When the sliding member 130 is in the open position, the atomization substrate in the storage cavity 1101 can enter the atomization module 120 through the buffer cavity 1102 and the e-liquid guide hole 1201, and the atomization module 120 can heat and atomize the atomization substrate to form aerosol. Specifically, the atomization module 120 may include an atomization tube 121 and an e-liquid guide member 122 inside the atomization tube 121. The e-liquid guide hole 1201 is provided on the side wall of the atomization tube 121, and the e-liquid guide member 122 wraps around a heating element (not shown in the figure). The e-liquid guide member 122 can guide the atomization substrate in the buffer cavity 1102 to a position close to the heating element through the e-liquid guide hole 1201, so that the atomization substrate is heated and atomized to form aerosol. The e-liquid guide member 122 may be made of ceramic or e-liquid guide cotton, and the heating element may be a heating wire or a heating sheet, etc.

[0021] Optionally, please refer to FIG. 4, which is a cross-sectional schematic diagram of the housing of the atomization assembly shown in FIG. 1. The housing 110 is provided with a partition plate 111 having a through-

hole 1103. The partition plate 111 divides space inside the housing 110 into the storage cavity 1101 and the buffer cavity 1102, and the storage cavity 1101 and the buffer cavity 1102 can be communicated through the through-hole 1103. The sliding member 130 is inserted through the through-hole 1103, and one end of the sliding member 130 is provided with an e-liquid blocking part 131. The projection area of the e-liquid blocking part 131 along the normal direction of the through-hole 1103 is larger than the cross-sectional area of the through-hole 1103, so that it can completely cover the through-hole 1103. When the sliding member 130 is in the closed position, the e-liquid blocking part 131 can seal the through-hole 1103 to separate the storage cavity 1101 from the buffer cavity 1102. Further, the e-liquid blocking part 131 may be made of plastic, metal, metal alloy, etc., and its shape may be circular, square, or other shapes matching the through-hole 1103.

[0022] Optionally, please refer to FIG. 5, which is a schematic structural diagram of a linkage member of the atomization assembly shown in FIG. 1. The sliding member 130 further includes a linkage member 132. The linkage member 132 includes a main body part 1323, and a first end part 1321 and a second end part 1322 located at both ends of the main body part 1323, and the first end part 1321 is connected to the e-liquid blocking part 131. Optionally, the e-liquid blocking part 131 and the linkage member 132 may be of an integrated structure, which can be formed by integral injection molding. Further, the e-liquid blocking part 131 and the linkage member 132 may alternatively be of a split structure, and the e-liquid blocking part 131 and the first end part 1321 of the linkage member 132 are detachably connected. Specifically, the first end part 1321 and the e-liquid blocking part 131 can be connected together by means of clamping or interference fit. The linkage member 132 may be made of materials such as plastic, metal, or metal alloy, and the shape of the main body part 1323 may be cylindrical, prismatic, or other shapes adapted to the through-hole 1103. When the atomization assembly 10 is connected to a battery assembly 20, the sliding member 130 is in the open position, and the second end part 1322 is held against by the battery assembly 20, so that the linkage member 132 drives the e-liquid blocking part 131 away from the through-hole 1103. Specifically, when the sliding member 130 is in the open position, the e-liquid blocking part 131 and the first end part 1321 of the linkage member 132 are far away from the through-hole 1103 and enter the storage cavity 1101. The e-liquid blocking part 131 no longer seals the through-hole 1103, and the atomization substrate in the storage cavity 1101 can enter the buffer cavity 1102 through the through-hole 1103, and then enter the atomization module 120 through the e-liquid guide hole 1201.

[0023] Optionally, the atomization assembly 10 further includes an elastic member 140. The elastic member 140 is connected to the sliding member 130, and the elastic member 140 is used to provide an elastic force that drives

the sliding member 130 to move from the open position to the closed position. Further, the elastic member 140 is made of plastic or metal alloy with an elastic deformation capability. Specifically, the elastic member 140 may be a spring and is arranged around the linkage member 132.

[0024] Optionally, please refer to FIG. 6, which is a cross-sectional schematic diagram of a base of the atomization assembly shown in FIG. 1. The atomization assembly 10 further includes a base 150, and the buffer cavity 1102 is located between the base 150 and the housing 110. The base 150 is provided with a through docking channel 1501 and an air inlet channel 1502. The air inlet channel 1502 is in communication with the atomization tube 121 of the atomization module 120, and gas outside the atomization assembly 10 can enter the atomization tube 121 through the air inlet channel 1502. The second end part 1322 of the linkage member 132 is located in the docking channel 1501, and the second end part 1322 is adapted to the docking channel 1501, so that there is a small fitting gap between the second end part 1322 and the docking channel 1501, and they are slidable relative to each other, so that the linkage member 132 is driven to slide along the docking channel 1501 under driving by an external force. When the atomization assembly 10 is connected to the battery assembly 20, the battery assembly 20 can hold against the second end part 1322, so that the sliding member 130 as a whole slides away from the base 150 to the open position, thereby making the e-liquid blocking part 131 leave the through-hole 1103 and enabling the storage cavity 1101 and the buffer cavity 1102 to be communicated.

[0025] Further, the first end part 1321 of the linkage member 132 is clamped in the e-liquid blocking part 131. A protruding part 1324 is provided between the main body part 1323 and the second end part 1322 of the linkage member 132. One end of the elastic member 140 is connected to the protruding part 1324, and the other end is connected to the housing 110 around the through-hole 1103. The elastic member 140 is compressed between the protruding part 1324 and the housing 110 to apply a force to the protruding part 1324 that is away from the housing 110, so that the e-liquid blocking part 131 seals the through-hole 1103.

[0026] Optionally, the cross-sectional area of the main body part 1323 of the linkage member 132 is smaller than the area of the through-hole 1103, so that when the sliding member 130 is in the open position, there is a gap between the sliding member 130 and the through-hole 1103, and the atomization substrate in the storage cavity 1101 can enter the buffer cavity 1102 from the gap.

[0027] Further, please refer to FIG. 7 to FIG. 10 together. FIG. 7 is an axial cross-sectional view of another embodiment of the atomization assembly of this application, FIG. 8 is a cross-sectional schematic diagram of the atomization assembly shown in FIG. 7 when the sliding member is in the closed position, FIG. 9 is a cross-sectional schematic diagram of the atomization assembly shown in FIG. 7 when the sliding member is in the

open position, and FIG. 10 is a schematic structural diagram of the linkage member of the atomization assembly shown in FIG. 7. One end of the elastic member 140 in this embodiment is connected to the protruding part 1324, and the other end is connected to the partition plate 111 around the through-hole 1103. When the sliding member 130 is in the closed position, the elastic member 140 is in a compressed state, and the protruding part 1324 is far away from the through-hole 1103 under an elastic force of the elastic member 140, so that the e-liquid blocking part 131 seals the through-hole 1103. In this case, the protruding part 1324 can abut against the base 150 and serve as a limit for downward movement of the linkage member 132 to an extreme position.

[0028] Optionally, the main body part 1323 is provided with a hollow channel 13231, as well as an e-liquid inlet hole 13232 and an e-liquid outlet hole 13233 that are in communication with the hollow channel 13231. When the atomization assembly 10 is connected to the battery assembly 20, the second end part 1322 of the linkage member 132 is held against by the battery assembly 20, so that the sliding member 130 moves from the closed position to the open position. The e-liquid inlet hole 13232 moves from the buffer cavity 1102 to the storage cavity 1101, and the e-liquid outlet hole 13233 is located in the buffer cavity 1102. The atomization substrate in the storage cavity 1101 can enter the hollow channel 13231 through the e-liquid inlet hole 13232 and then enter the buffer cavity 1102 from the e-liquid outlet hole 13233. Further, when the sliding member 130 is in the open position, the e-liquid outlet hole 13233 can be directly opposite to the e-liquid guide hole 1201, so that the atomization substrate in the hollow channel 13231 can directly enter the atomization module 120 through the e-liquid outlet hole 13233 and the e-liquid guide hole 1201.

[0029] Optionally, the atomization assembly 10 further includes a mouthpiece 160. The aerosol generated by the atomization module 120 heating and atomizing the atomization substrate can be discharged from the mouthpiece 160 through the atomization tube 121. Sealing rings 170 are arranged between the mouthpiece 160 and the housing 110, between the mouthpiece 160 and the atomization module 120, between the base 150 and the housing 110, and between the second end part 1322 and the docking channel 1501, to prevent the atomization substrate in the storage cavity 1101 and the buffer cavity 1102 from leaking. Further, a metal electrode 180 is further installed on the base 150. The metal electrode 180 is riveted with a heating wire of the atomization module 120 and can be electrically connected to the battery assembly 20 to supply power to the atomization module 120.

[0030] Further, please refer to FIG. 11 to FIG. 13 together. FIG. 11 is a cross-sectional schematic diagram of an embodiment of an atomization device of this application, FIG. 12 is a cross-sectional schematic diagram of the atomization device shown in FIG. 11 from another angle, and FIG. 13 is a cross-sectional schematic dia-

gram of a fixing bracket of the atomization device shown in FIG. 11. An embodiment of this application further provides an atomization device, which includes the atomization assembly 10 in the above embodiment and a battery assembly 20. The battery assembly 20 is electrically connected to the atomization assembly 10 to supply power to the atomization assembly 10.

[0031] Optionally, the battery assembly 20 includes a fixing bracket 210. The fixing bracket 210 is provided with an abutting part 211. When the atomization assembly 10 is connected to the battery assembly 20, the abutting part 211 abuts against the sliding member 130, so that the sliding member 130 is in the open position. Specifically, the abutting part 211 can extend into the docking channel 1501 of the base 150 and abut against the second end part 1322 of the linkage member 132, so that the linkage member 132 drives the e-liquid blocking part 131 to leave the through-hole 1103. Optionally, in some other embodiments, the fitting relationship between the abutting part 211 and the docking channel 1501 can also play a role in preventing the atomization assembly 10 from being universally matched with the battery assembly 20.

[0032] Optionally, the battery assembly 20 further includes a spring electrode 220. The spring electrode 220 can be electrically connected to the metal electrode 180 of the atomization assembly 10 to conduct the current of a battery 250 and supply power to the atomization module 120. Further, the battery assembly 20 is further provided with a magnet 230. The magnet 230 can attract the metal electrode 180 to ensure that the spring electrode 220 and the metal electrode 180 are not disconnected during a connection process of the atomization assembly 10 and the battery assembly 20. Further, the battery assembly 20 further includes a microphone 240. When a user inhales through the mouthpiece 160, the microphone 240 can sense changes in air flow and provide a signal to the battery 250, so that the battery outputs current to supply power to the atomization assembly 10, and the atomization module 120 further heats and atomizes the atomization substrate to form aerosol.

[0033] When the atomization assembly 10 is connected to the battery assembly 20, the sliding member 130 is in the open position, the storage cavity 1101 and the buffer cavity 1102 are communicated, and the atomization substrate can quickly enter the atomization module 120 to be heated and atomized. When the atomization device is not in use, the atomization assembly 10 and the battery assembly 20 can be separated, and the sliding member 130 automatically resets to the closed state under an elastic force of the elastic member 140, and the storage cavity 1101 is separated from the buffer cavity 1102, which prevents the atomization substrate from entering the atomization module 120 and causing e-liquid leakage.

[0034] In the atomization device and the atomization assembly thereof provided by this application, the sliding member 130 is arranged in the housing 110 to control the connection or separation between the storage cavity

1101 and the buffer cavity 1102, thereby opening or closing the channel for the atomization substrate in the storage cavity 1101 to enter the atomization module 120. This avoids the atomization module 120 being immersed in the atomization substrate for a long time when the atomization device is not in use, and alleviates the problem of e-liquid leakage during product storage.

[0035] The above are only partial embodiments of the present application, and do not limit the protection scope of the present application. Any equivalent device or equivalent process transformation made by using the content of the description and drawings of the present application, or directly or indirectly applied in other related technical fields, shall similarly be included in the patent protection scope of the present application.

Claims

1. An atomization assembly, wherein the atomization assembly comprises a housing, an atomization module, and a sliding member; the atomization module is arranged in the housing, and an e-liquid guide hole is formed in a side wall of the atomization module; a storage cavity and a buffer cavity are arranged in the housing, the storage cavity is used for storing an atomization substrate, and the buffer cavity is in communication with the e-liquid guide hole; and the sliding member is slidably arranged in the housing and is movable between an open position and a closed position, so as to selectively connect or separate the storage cavity and or from the buffer cavity.
2. The atomization assembly according to claim 1, wherein the housing is provided with a partition plate having a through-hole, the partition plate divides space inside the housing into the storage cavity and the buffer cavity which are communicated through the through-hole, the sliding member is inserted through the through-hole, and an e-liquid-blocking part is provided at one end of the sliding member close to the storage cavity; and when the sliding member is in the closed position, the e-liquid-blocking part seals the through-hole, to separate the storage cavity from the buffer cavity.
3. The atomization assembly according to claim 2, wherein the sliding member comprises a linkage member, the linkage member comprises a main body part and a first end part and a second end part located at both ends of the main body part, the first end part is connected to the e-liquid-blocking part; the atomization assembly further comprises a base, the buffer cavity is located between the base and the housing; and the second end part is at least partially inserted into the base and is slidable relative to the base, so that under driving by an external force, the

linkage member is driven to slide along the base, so as to drive the e-liquid-blocking part away from the through-hole.

4. The atomization assembly according to claim 2, 5
 wherein the atomization assembly further comprises
 an elastic member disposed in the buffer cavity, both
 ends of the elastic member are respectively con-
 nected to the sliding member and the housing, and 10
 the elastic member is used to provide an elastic
 restoring force that drives the sliding member to
 move from the open position to the closed position.

5. The atomization assembly according to claim 3, 15
 wherein the base is provided with a through docking
 channel, the second end part of the linkage member
 is slidably disposed in the docking channel, and the
 second end part is able to be pushed to move toward
 the buffer cavity. 20

6. The atomization assembly according to claim 3,
 wherein the e-liquid-blocking part and the first end
 part are detachably connected.

7. The atomization assembly according to claim 4, 25
 wherein a protruding part is provided between the
 main body part and the second end part of the
 linkage member, and the elastic member is com-
 pressed between the protruding part and the housing
 to apply a force to the protruding part that is away 30
 from the housing, so that the e-liquid-blocking part
 seals the through-hole.

8. The atomization assembly according to claim 2, 35
 wherein the sliding member is provided with a hollow
 channel, as well as an e-liquid inlet hole and an e-
 liquid outlet hole that are in communication with the
 hollow channel; and when the sliding member is in
 the open position, the e-liquid inlet hole is located in
 the storage cavity and the e-liquid outlet hole is 40
 located in the buffer cavity, and the atomization
 substrate in the storage cavity is able to reach the
 atomization module through the hollow channel.

9. An atomization device, comprising the atomization 45
 assembly according to any one of claims 1-8, where-
 in the atomization device further comprises a battery
 assembly, and the battery assembly is electrically
 connected to the atomization assembly to supply
 power to the atomization assembly. 50

10. The atomization device according to claim 9, where-
 in the battery assembly is convexly provided with an
 abutting part; and when the atomization assembly is
 connected to the battery assembly, the abutting part 55
 abuts against the sliding member, so that the sliding
 member is in the open position.

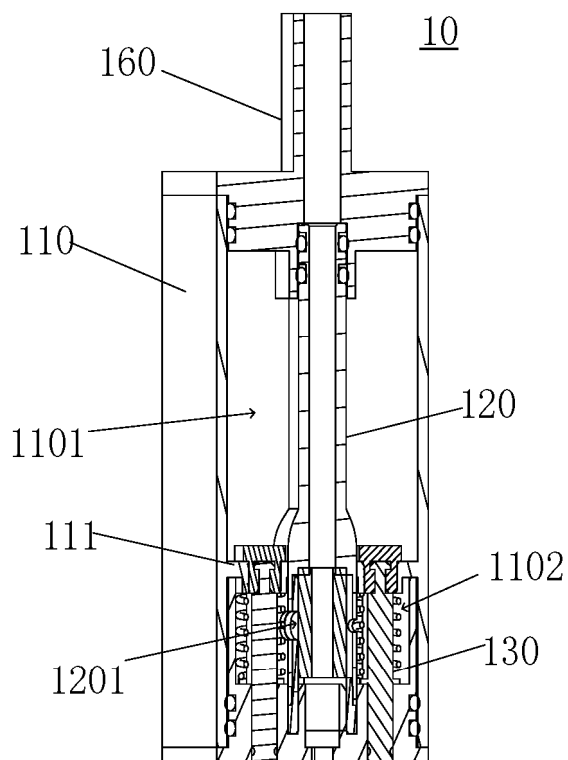


FIG. 1

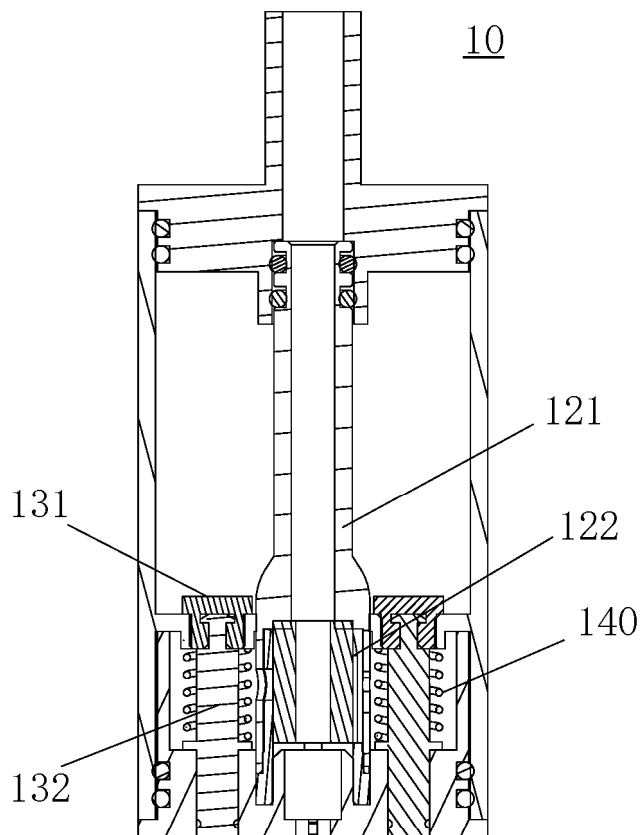


FIG. 2

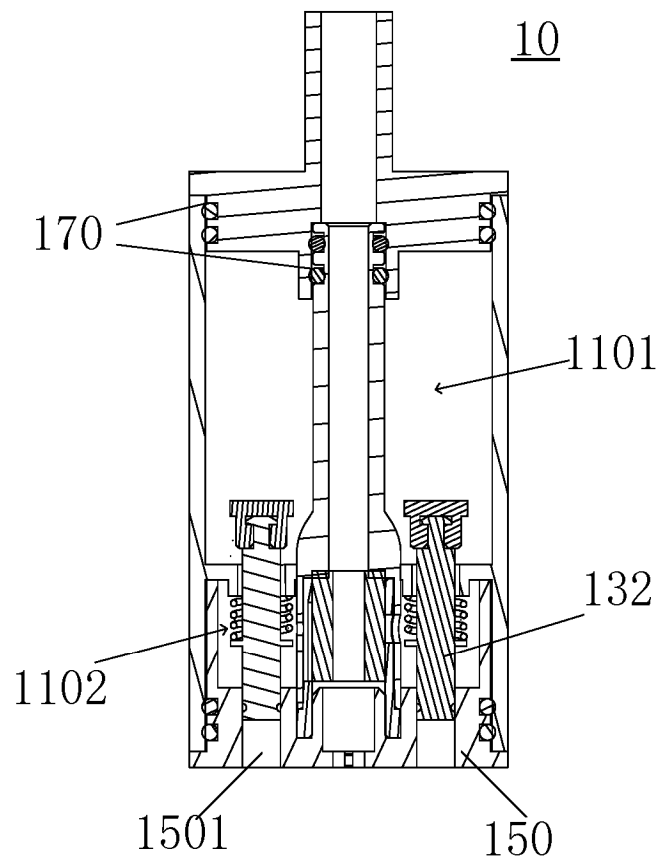


FIG. 3

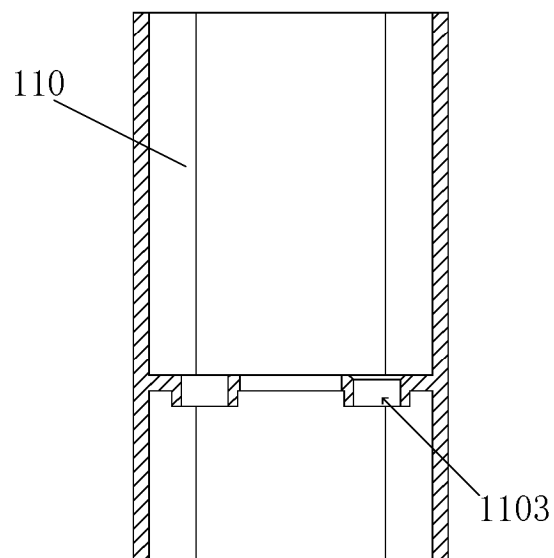


FIG. 4

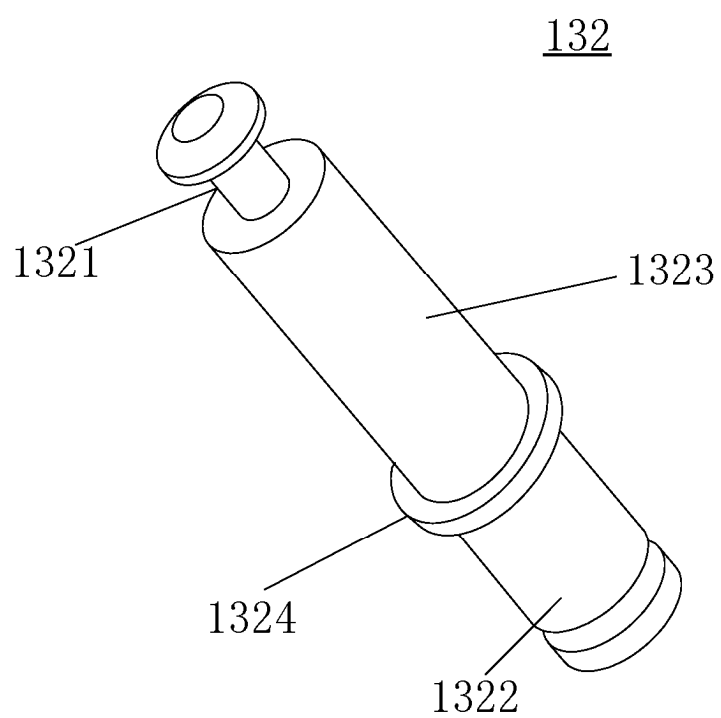


FIG. 5

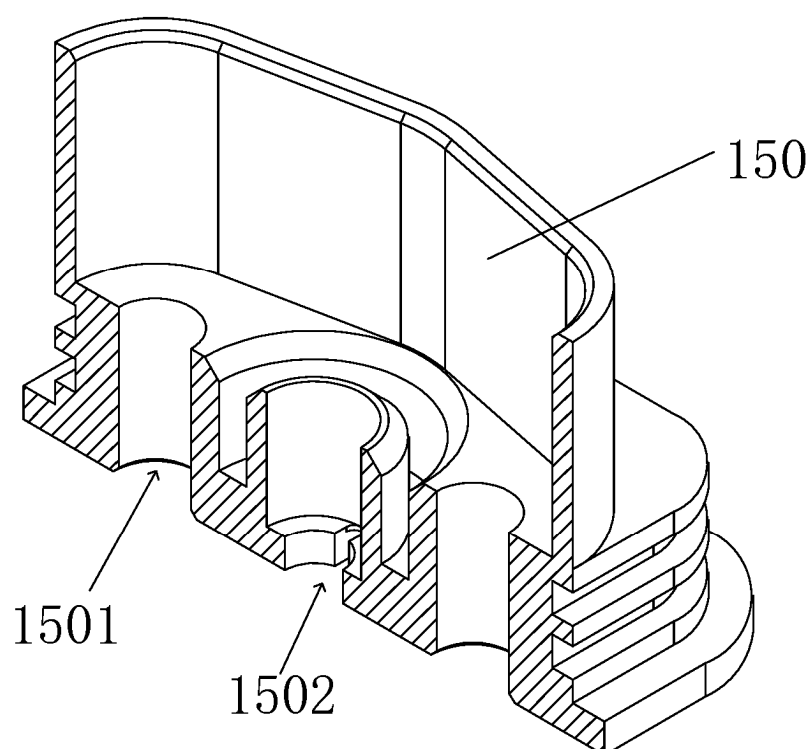


FIG. 6

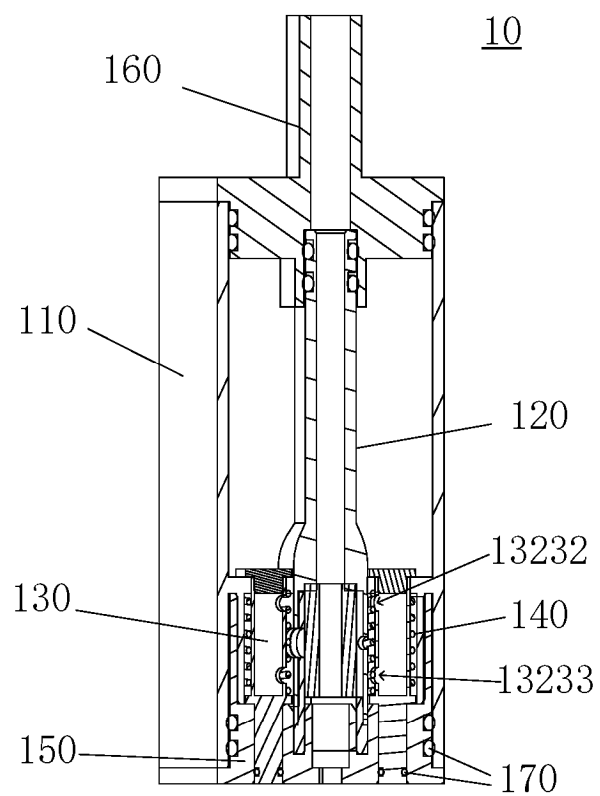


FIG. 7

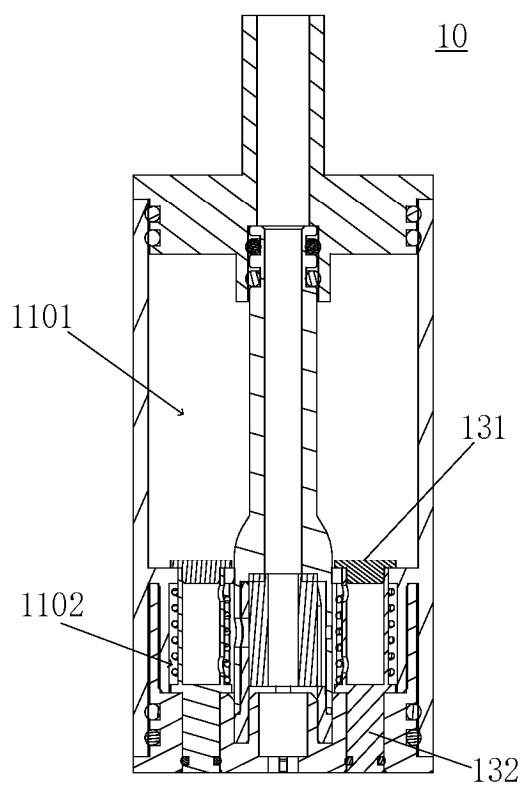


FIG. 8

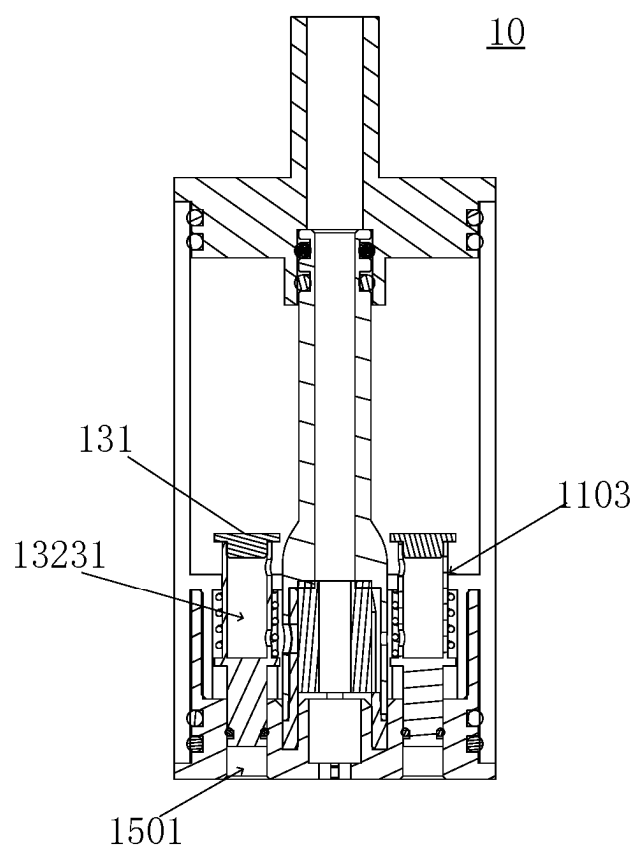


FIG. 9

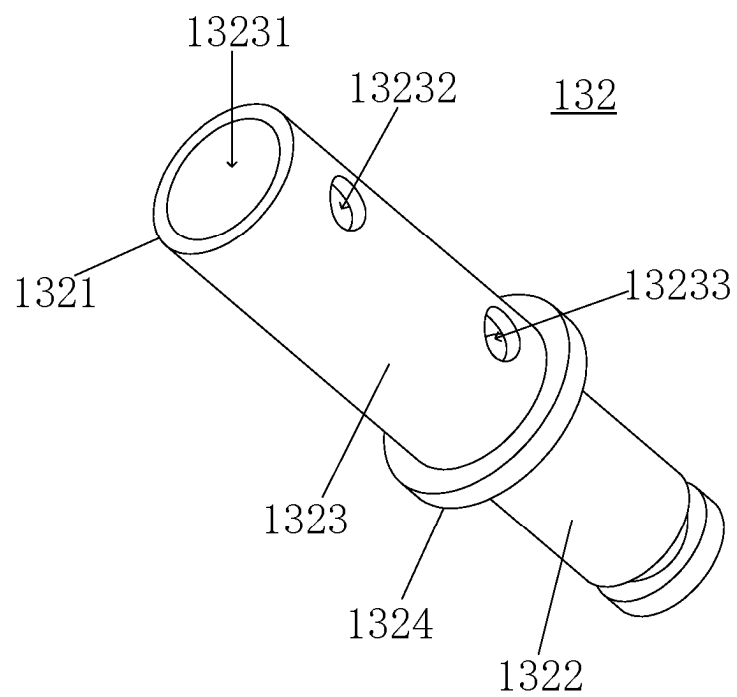


FIG. 10

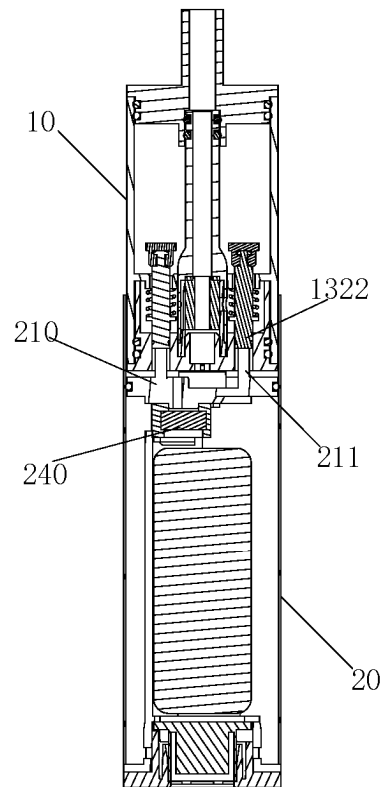


FIG. 11

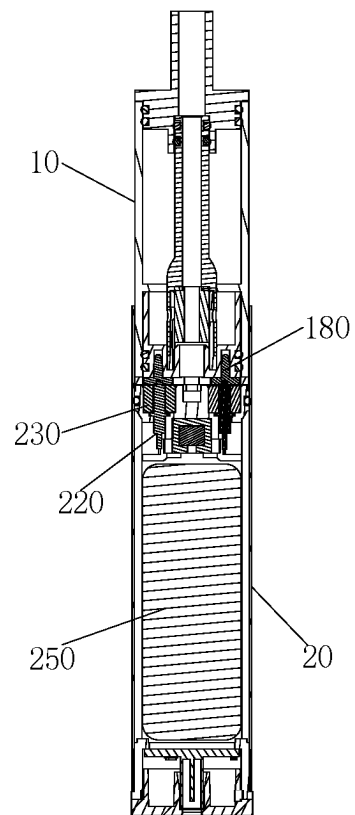


FIG. 12

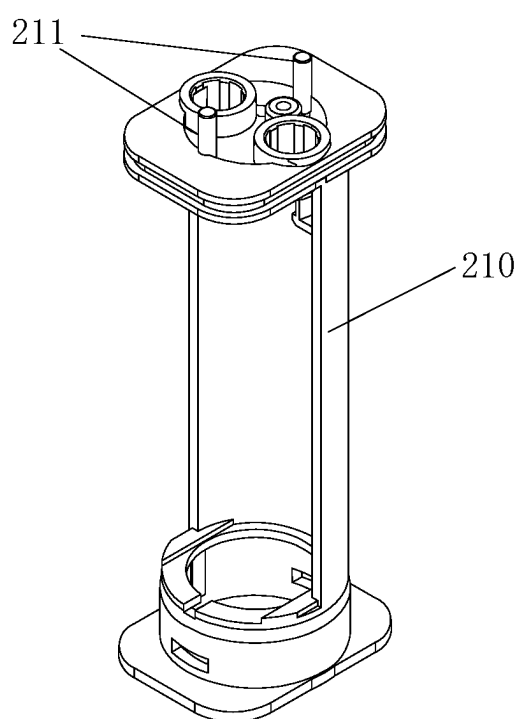


FIG. 13

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2023/132655

A. CLASSIFICATION OF SUBJECT MATTER

A24F40/40(2020.01)i; A24F40/46(2020.01)i; A24F40/485(2020.01)i; A24F40/10(2020.01)i

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: A24F

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

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

CNTXT, ENTXTC, VEN: 雾化器, 打开, 关闭, 滑动, 移动, atomizer, open, close, slid+, mov+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 111329112 A (SHENZHEN WOODY VAPES TECHNOLOGY CO., LTD.) 26 June 2020 (2020-06-26) description, paragraphs 34, 56, and 61, and figures 1-5	1-10
X	CN 216088847 U (ALD GROUP LTD.) 22 March 2022 (2022-03-22) description, paragraphs 10 and 27-45, and figures 1-2	1-10
X	CN 211746944 U (CHANGZHOU PATENT ELECTRONIC TECHNOLOGY CO., LTD.) 27 October 2020 (2020-10-27) claims 1 and 10, and figures 1-3	1-10
X	CN 215583156 U (SHENZHEN ZHIYUAN ZHIICHUANG TECHNOLOGY CO., LTD.) 21 January 2022 (2022-01-21) claims 1 and 10, and figures 1-4	1-10
X	WO 2023124739 A1 (JOYETECH (SHENZHEN) ELECTRONICS CO., LTD.) 06 July 2023 (2023-07-06) claims 1-10, and figures 1-9	1-10

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

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"E" earlier application or patent but published on or after the international filing date	"&" document member of the same patent family
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

11 June 2024

Date of mailing of the international search report

11 June 2024

Name and mailing address of the ISA/CN

China National Intellectual Property Administration (ISA/
CN)
China No. 6, Xitucheng Road, Jimenqiao, Haidian District,
Beijing 100088

Authorized officer

Telephone No.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2023/132655

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Patent document cited in search report			Publication date (day/month/year)		Patent family member(s)		Publication date (day/month/year)
CN	111329112	A	26 June 2020	WO	2021218723	A1	04 November 2021
CN	216088847	U	22 March 2022		None		
CN	211746944	U	27 October 2020		None		
CN	215583156	U	21 January 2022		None		
WO	2023124739	A1	06 July 2023		None		