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(71) Applicant: **Changzhou Patent Electronic Technology Co., Ltd**
Changzhou, Jiangsu 213125 (CN)

(72) Inventor: **QIU, Weihua**
hangzhou, Jiangsu 213125 (CN)

(74) Representative: **Zaboliene, Reda Metida**
Business center Vertas
Gyneju str. 16
01109 Vilnius (LT)

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(54) **AIR INTAKE LIQUID BLOCKING STRUCTURE, ATOMIZER, AND AEROSOL GENERATING DEVICE**

(57) The utility model provides an air intake liquid blocking structure, an atomizer, and an aerosol generating device, the air intake liquid blocking structure comprising an outer sleeve and an air intake liquid blocking member. The air intake liquid blocking member comprises an air intake tube and at least two liquid blocking rib groups; the air intake tube comprises an open end, a closed end, and an outer peripheral wall; the open end is provided with an air intake hole; the outer peripheral wall is provided with air guide holes; each liquid blocking rib group comprises at least one liquid blocking section arranged along the circumferential direction; at least one liquid dropping notch is defined between liquid blocking sections located on the same circumference; and the projections of liquid dropping notches in adjacent liquid blocking rib groups along the axial direction of the air intake tube are staggered from each other and communicated with each other along the axial direction of the air intake tube to form liquid dropping passages. In the present utility model, by providing the liquid blocking rib groups and defining a plurality of liquid dropping passages between the liquid blocking rib groups, the liquid entering the outer sleeve from an atomization cavity can be absorbed by the liquid blocking rib groups, thereby preventing affecting the service life of a power supply device due to liquid leakage to the power supply device.

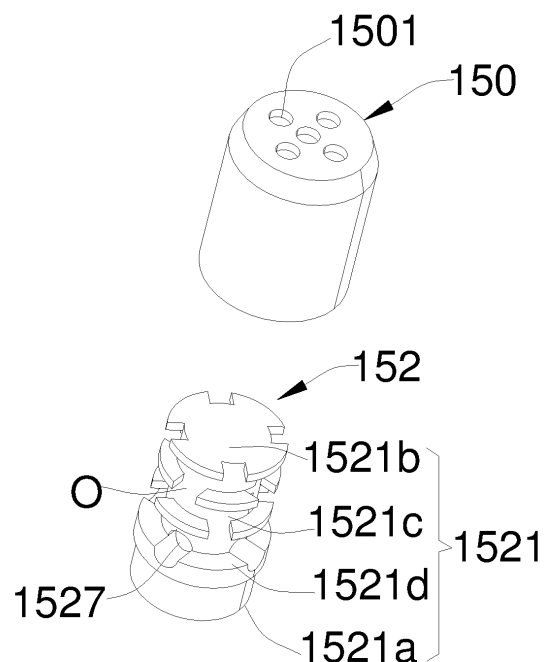


FIG. 3

Description**TECHNICAL FIELD**

5 [0001] The present application relates to an aerosol generating device, in particular to an air intake and liquid blocking structure, an atomizer and an aerosol generating device.

BACKGROUND

10 [0002] The aerosol generating device usually includes an atomizer and a power supply device electrically connected to the atomizer. The atomizer can heat and atomize the aerosol-forming substrate stored in the atomizer under the electric driving of the power supply device for inhalation by the user.

[0003] At present, the aerosol-forming substrate and/or condensate formed in the atomizing chamber of the atomizer is easy to leak to the power supply device through the air intake hole, so that after a long period of use, the leaked liquid is likely to affect the service life of the power supply device, and even reduce the safety performance of the aerosol generating device.

SUMMARY

20 [0004] In view of the above, it is necessary to provide an air intake and liquid blocking structure that prevents leakage of the aerosol-forming substrate in the atomizer.

[0005] It is also necessary to provide an atomizer with the above-mentioned air intake and liquid blocking structure.

[0006] It is even more necessary to provide an aerosol generating device with the above atomizer.

[0007] An air intake and liquid blocking structure includes:

25 an outer sleeve having an air outlet end facing toward an atomizing assembly, the air outlet end being provided with an air outlet hole communicating with an atomizing chamber provided in the atomizing assembly; and
 an air intake and liquid blocking member being inserted into the outer sleeve, the air intake and liquid blocking member including an air intake tube and at least two liquid blocking rib groups; the air intake tube including an open
 30 end and a closed end along its axial direction, and an outer peripheral wall connected between the open end and the closed end;
 the open end being provided with an air intake hole communicating the outside with an inner cavity of the air intake tube, the outer peripheral wall being provided with an air guide hole communicating the inner cavity of the air intake tube with the air outlet hole;
 35 wherein all the liquid blocking rib groups are arranged at intervals along the axial direction of the air intake tube, each liquid blocking rib group includes at least one liquid blocking rib protruding outwards along a radial direction of the air intake tube and arranged along a circumferential direction of the air intake tube, at least one liquid dripping notch is formed between the liquid blocking ribs located on the same circumference;
 the liquid dripping notches in adjacent liquid blocking rib groups are staggered from each other along an axial
 40 direction of the air intake tube and communicated with each other to form liquid dripping passages.

[0008] In one embodiment, the liquid dripping notch formed in the liquid blocking rib group adjacent to the air outlet hole is staggered from the air outlet hole along the axial direction of the air intake tube.

45 [0009] In one embodiment, a surface of the liquid blocking rib of the liquid blocking rib group adjacent to the air outlet hole is a rough surface that faces toward the air outlet hole.

[0010] In one embodiment, the number of the air outlet hole provided on the air outlet end is multiple, the closed end of the air intake tube faces toward the multiple air outlet holes, and the projections of the multiple air outlet holes completely fall into the surface of the closed end.

50 [0011] In one embodiment, the air guide hole is located between the at least two liquid blocking rib groups and the air intake hole, and the number of the air guide hole is multiple, which are arranged along the circumferential direction of the air intake tube.

[0012] In one embodiment, the outer sleeve is made of metal material, and the air outlet hole of the outer sleeve faces toward a heating surface of an atomizer.

55 [0013] In one embodiment, a sealing flange protrudes radially outwards from the outer peripheral wall of the air intake tube adjacent to the open end, the outer sleeve is sealed and sleeved outside the sealing flange and surrounds the air guide hole;

wherein there is a gap formed between an inner surface of the outer sleeve and the liquid blocking rib in each liquid blocking rib group, allowing outside air to flow into the atomizing chamber and preventing liquid in the atomizing chamber

from flowing out to the outside.

[0014] An atomizer includes an atomizing assembly provided with an atomizing chamber, and the air intake and liquid blocking structure described above.

[0015] In one embodiment, the atomizing assembly includes a base provided with the atomizing chamber and an atomizing core installed in the atomizing chamber, the air intake and liquid blocking structure is installed on the base and located below the atomizing core, the air outlet end of the outer sleeve with the air outlet hole extends into the atomizing chamber.

[0016] An aerosol generating device includes the atomizer described above.

[0017] In the air intake and liquid blocking structure of the present application, by setting the liquid blocking rib groups and forming several liquid dripping passages between the liquid blocking rib groups, the aerosol-forming substrate in the atomizing chamber and/or the condensate formed can be absorbed by the liquid blocking rib groups after entering the outer sleeve through the air outlet holes, thereby preventing the liquid from leaking to the power supply device through the air guide holes and the air intake hole and affecting the service life of the power supply device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018]

FIG. 1 is a schematic structural view of an atomizer in an embodiment of the present application;

FIG. 2 is a cross-sectional view of the atomizer shown in FIG. 1;

FIG. 3 is an exploded schematic view of the air intake and liquid blocking structure of the atomizer shown in FIG. 1 from one viewing angle;

FIG. 4 is an exploded schematic view of the air intake and liquid blocking structure of the atomizer shown in FIG. 1 from another viewing angle.

atomizer 100	atomizing assembly 11
base 110	atomizing core 112
liquid storage member 13	liquid storage chamber 130
air intake and liquid blocking structure 15	outer sleeve 150
air outlet hole 1501	air intake and liquid blocking member 152
air intake tube 1521	open end 1521a
closed end 1521b	outer peripheral wall 1521c
flange 1521d	
liquid blocking rib group 1523	liquid blocking rib 1523a
air intake hole 1525	air guide hole 1527
atomizing chamber a	liquid accommodating groove b

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0019] In order to facilitate the understanding of the present application, the present application will be described more fully below with reference to the relevant drawings. Preferred embodiments of the present application are provided in the accompanying drawings. However, the present application can be embodied in many different forms and is not limited to the embodiments described herein. On the contrary, the purpose of providing these embodiments is to make the understanding of the disclosure of the present application more thorough and comprehensive.

[0020] It should be noted that when an element is referred to as being "fixed" to another element, it can be directly on the other element or there can also be an intervening element. When an element is considered "connected" to another element, it may be directly connected to another element or there may be an intervening element at the same time.

[0021] Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the technical field of this present application. The terminology used in the description of the present application herein is only for the purpose of describing specific embodiments, and is not intended to limit the present application. As used herein, the term "and/or" includes any and all combinations of one or more of the associated listed items.

[0022] Please refer to FIG. 1, an embodiment of the present application provides an aerosol generating device. The

aerosol generating device includes an atomizer 100 and a power supply device (not shown) electrically connected to the atomizer 100. In use, the power supply device is used to provide electric energy to the atomizer 100, so as to heat the aerosol-forming substrate stored in the atomizer 100, and the aerosol-forming substrate is atomized under heating to form smoke for the user to inhale.

[0023] Please refer to FIG. 2, the atomizer 100 includes an atomizing assembly 11, a liquid storage member 13, and an air intake and liquid blocking structure 15. Specifically, a liquid storage chamber 130 for storing the aerosol-forming substrate is formed in the liquid storage member 13. The atomizing assembly 11 is located in the gravity direction of the aerosol-forming substrate in the liquid storage chamber 130, and is configured for absorbing and atomizing the aerosol-forming substrate provided by the liquid storage chamber 130. The air intake and liquid blocking structure 15 is arranged in the atomizing assembly 11, and is configured to provide airflow for the atomization work of the atomizing assembly 11 and simultaneously absorb the aerosol-forming substrate and/or condensate flowing out from the atomizing assembly 11, so as to avoid the service life of the power supply device from being affected due to leakage of the aerosol-forming substrates and/or condensate.

[0024] Specifically, the atomizing assembly 11 includes a base 110 and an atomizing core 112. The base 110 is configured to provide support for the installation of the atomizing core 112, and has a hollow inner cavity to form an atomizing chamber a. The liquid storage member 13 is installed on the base 110, and the atomizing core 112 is installed in the atomizing chamber a and is located in the gravity direction of the aerosol-forming substrate in the liquid storage chamber 130. In use, the aerosol-forming substrate in the liquid storage chamber 130 flows to the atomizing core 112, under the action of the electric energy provided by the power supply device to the atomizer 100, the aerosol-forming substrate absorbed by the atomizing core 112 is heated and atomized to form smoke, and the smoke is inhaled under the user's inhalation action.

[0025] Please refer to FIG. 3 and FIG. 4, the air intake and liquid blocking structure 15 includes an outer sleeve 150, and an air intake and liquid blocking member 152. Specifically, one axial end of the outer sleeve 150 is open, and the other axial end of the outer sleeve 150 is provided with an air outlet hole 1501 communicating with the atomizing chamber a in the atomizing assembly 11. That is, one end of the outer sleeve 150 facing toward the atomizing assembly 11 is semi-closed, so that the outer sleeve 150 has an air outlet end facing toward the atomizing core 112.

[0026] In this specific embodiment, the outer sleeve 150 is made of metal material, and the air outlet hole 1501 of the outer sleeve 150 faces toward a heating surface of the atomizing core 112. It can be understood that the outer sleeve 150 can be integrated with the base 110 of the atomizer 100, or can be installed in the base 110 of the atomizer 100 as a separate component. The outer sleeve 150 is preferably a separate component and made of metallic material. Since the air outlet hole 1501 of the outer sleeve 150 faces toward the heating surface of the atomizing core 112, the outer sleeve 150 made of metallic material can be effectively prevented from being melted by high temperature to block the air outlet hole 1501.

[0027] The air intake and liquid blocking member 152 is inserted into the outer sleeve 150, and includes an air intake tube 1521 and at least two liquid blocking rib groups 1523. The air intake tube 1521 includes an open end 1521a and a closed end 1521b along the axial direction, and an outer peripheral wall 1521c connected between the open end 1521a and the closed end 1521b. The open end 1521a is provided with an air intake hole 1525 that communicates the outside with the inner cavity of the air intake tube 1521. The outer peripheral wall 1521c is provided with an air guide hole 1527 that communicates the inner cavity of the air intake tube 1521 with the air outlet hole 1501.

[0028] In this specific embodiment, the air guide hole 1527 is arranged on one end of the air intake tube 1521 close to the air intake hole 1525, and is located between the at least two liquid blocking rib groups 1523 and the air intake hole 1525. The number of the air guide hole 1527 is multiple, which are arranged along the circumferential direction of the air intake tube 1521, so that the air flowing in through the air intake hole 1525 can flow out in a distributed manner through the multiple air guide holes 1527.

[0029] Further, a sealing flange 1521d protrudes radially outwards from the outer peripheral wall of the air intake tube 1521 adjacent to the open end 1521a. The outer sleeve 150 is sealed and sleeved outside the sealing flange 1521d and surrounds the air guide holes 1527. That is, the sealing flange 1521d is formed between the open end 1521a of the air intake tube 1521 and the air guide holes 1527 (i.e., located below the air guide holes 1527). The inner surface of the open end of the outer sleeve 150 is sealed and supported on the sealing flange 1521d, and the air guide holes 1527 are enclosed in the inner cavity of the outer sleeve 150. In this way, it is ensured that the open end of the outer sleeve 150 is sealed by the air intake tube 1521, so as to prevent the aerosol-forming substrate and/or condensate dripping out from the atomizing chamber a from flowing out from a gap between the two. At the same time, the outside air after entering the inner cavity of the air intake tube 1521 through the air intake hole 1525 can be guided into a gap between the outer sleeve 150 and the air intake and liquid blocking member 152 through the air guide holes 1527.

[0030] All the liquid blocking rib groups 1523 are arranged at intervals along the axial direction of the air intake tube 1521. Each liquid blocking rib group 1523 includes at least one liquid blocking rib 1523a protruding outwards along the radial direction of the air intake tube 1521 and arranged along the circumferential direction of the air intake tube 1521. There is a gap formed between the inner surface of the outer sleeve 150 and the liquid blocking rib 1523a in each liquid

blocking rib group 1523, allowing the outside air to flow into the atomizing chamber a and preventing the liquid in the atomizing chamber a from flowing out to the outside. The gap forms an air intake passage communicating the air guide hole 1527 with the air outlet hole 1501. The outside air enters from the air intake hole 1525 and passes through the air guide hole 1527 of the outer peripheral wall 1521c, reaches the air outlet hole 1501 of the outer sleeve 150 along the air intake passage, and then flows into the atomizing chamber a, so as to be mixed with the smoke formed by heating for the user to inhale under the user's suction. At the same time, the above-mentioned gap can prevent liquid from passing through and entering the next layer of liquid blocking rib group 1523 (since the aerosol-forming substrate in the atomizing chamber a and/or the condensate formed has a certain viscosity relative to ordinary liquids, the reasonable setting of the above-mentioned gap makes the liquid unable to pass through in large quantities due to surface tension), so that the above-mentioned gap can prevent liquid from leaking out while ensuring the air intake.

[0031] Specifically, at least one liquid dripping notch O is formed between the liquid blocking ribs 1523a located on the same circumference. The liquid dripping notches O in adjacent liquid blocking rib groups 1523 are staggered from each other along the axial direction of the air intake tube 1521. Meanwhile, the liquid dripping notches O in the adjacent liquid blocking rib groups 1523 are communicated with each other along the axial direction of the air intake tube 1521 to form liquid dripping passages.

[0032] That is, all the liquid blocking rib groups 1523 are arranged layer by layer along the axial direction of the air intake tube 1521, each liquid dripping notch O of the liquid blocking rib group 1523 in the upper layer overlaps with the liquid blocking rib 1523a of the liquid blocking rib group 1523 in the next layer, so that the liquid dripping notches O in adjacent liquid blocking rib groups 1523 are staggered in the axial direction of the air intake tube 1521, that is, the liquid dripping passage formed by the liquid dripping notches O of the adjacent liquid blocking rib groups 1523 communicating with each other in the axial direction of the air intake tube 1521 is a curved passage rather than a straight-through passage.

[0033] In this specific embodiment, there are three liquid blocking rib groups 1523 arranged at intervals along the axial direction of the air intake tube 1521, and each liquid blocking rib group 1523 includes four liquid blocking ribs 1523a arranged along the circumferential direction of the air intake tube 1521, that is, each liquid blocking rib group 1523 defines four liquid dripping notches O. The liquid dripping notches O in the three liquid blocking rib groups 1523 communicate with each other in the axial direction of the air intake tube 1521 to form liquid dripping passages.

[0034] During use, part of the aerosol-forming substrate in the atomizing chamber a and/or the condensate formed enters the outer sleeve 150 through the air outlet hole 1501, and is dropped on at least one of the liquid blocking ribs 1523a of the uppermost liquid blocking rib group 1523 (that is, the liquid blocking rib group closest to the atomizing assembly 11) after entering the outer sleeve 150. The liquid blocking rib 1523a can absorb part of the liquid, and another part of the liquid drops onto the liquid blocking rib group 1523 in the next layer through the liquid dripping notches O. The liquid blocking rib group 1523 in the next layer also absorbs part of the liquid. Ideally, when the number of the liquid blocking rib group 1523 is sufficient, it can be considered that the liquid can be completely absorbed, and no liquid leaks out through the air guide holes 1527 and the air intake hole 1525.

[0035] Preferably, the surface of the liquid blocking rib 1523a of the liquid blocking rib group 1523 adjacent to the air outlet hole 1501 is a rough surface that faces toward the air outlet hole 1501, so as to enhance the absorption capacity of the liquid blocking rib 1523a.

[0036] Preferably, the liquid dripping notch O formed in the liquid blocking rib group 1523 adjacent to the air outlet hole 1501 is staggered from the air outlet hole 1501 along the axial direction of the air intake tube 1521. That is, the position of the air outlet hole 1501 is staggered from the position of the liquid dripping notch O in the liquid blocking rib group 1523, so that when the aerosol-forming substrate in the atomizing chamber a and/or the condensate formed drips through the air outlet hole 1501, it preferentially drops on the end surface of the closed end 1521b of the air intake tube 1521 and is partially absorbed, only the liquid that cannot be absorbed on the end surface of the closed end 1521b will drop through the liquid dripping notches O to the liquid blocking ribs 1523a in the next layer. Further, the air intake and liquid blocking structure 15 is installed on the base 110 and located below the atomizing core 112, the air outlet end of the outer sleeve 150 with the air outlet hole 1501 extends into the atomizing chamber a, and a liquid accommodating groove b is formed between the outer surface of the outer sleeve 150 and the base 110 due to height difference, most of the aerosol-forming substrate and/or the condensate formed having dripped from the atomizing chamber a is collected in the liquid accommodating groove b, and only the liquid directly facing the air outlet hole 1501 will drop into the outer sleeve 150, thereby reducing the risk of liquid leakage.

[0037] Further, the number of the air outlet hole 1501 provided on the air outlet end is multiple, the closed end 1521b of the air intake tube 1521 faces toward the multiple air outlet holes 1501, and the projections of the multiple air outlet holes 1501 completely fall into the surface of the closed end 1521b. In this specific embodiment, there are five air outlet holes 1501 provided on the air outlet end of the outer sleeve 150, so that the airflow can be concentrated and blow directly to the heating surface. Further, the closed end 1521b faces toward the multiple air outlet holes 1501, ensuring that when the aerosol-forming substrate in the atomizing chamber a and/or the condensate formed drips through the air outlet holes 1501, it preferentially drops on the end surface of the closed end 1521b of the air intake tube 1521 so as to be partially absorbed.

[0038] It can be understood that since the aerosol-forming substrate in the atomizing chamber a and/or the condensate formed has a certain viscosity relative to ordinary liquids, the air outlet holes 1501 of the outer sleeve 150 can be configured to be small in diameter and large in number, so that the liquid cannot enter the outer sleeve 150 through the air outlet holes 1501 in large quantities due to the surface tension while ensuring the air intake .

[0039] Similarly, the liquid dripping passages formed due to the liquid blocking ribs 1523a can be configured to be small in size and large in number, to prevent the liquid from passing through and entering the liquid blocking rib group 1523 in the next layer while ensuring the amount of air intake.

[0040] In the air intake and liquid blocking structure 15 of the present application, by setting the liquid blocking rib groups 1523 and forming several liquid dripping passages between the liquid blocking rib groups 1523, the aerosol-forming substrate in the atomizing chamber a and/or the condensate formed can be absorbed by the liquid blocking rib groups 1523 after entering the outer sleeve 150 through the air outlet holes 1501, thereby preventing the liquid from leaking to the power supply device through the air guide holes 1527 and the air intake hole 1525 and affecting the service life of the power supply device.

[0041] The present application also provides an atomizer 100 with the above-mentioned air intake and liquid blocking structure 15 and an aerosol generating device with the atomizer 100. Because the atomizer 100 and the aerosol generating device have all the functions of the above-mentioned air intake and liquid blocking structure 15, details are not repeated herein again.

[0042] The above-mentioned embodiments only express several implementations of the present application, and the description thereof is relatively specific and detailed, but it should not be construed as limiting the patent scope of the present application. It should be pointed out that those skilled in the art can make several modifications and improvements without departing from the concept of the present application, and these all belong to the protection scope of the present application. Therefore, the scope of protection of the present application patent should be based on the appended claims.

Claims

1. An air intake and liquid blocking structure, comprising:

an outer sleeve having an air outlet end facing toward an atomizing assembly, the air outlet end being provided with an air outlet hole communicating with an atomizing chamber provided in the atomizing assembly; and an air intake and liquid blocking member being inserted into the outer sleeve, the air intake and liquid blocking member including an air intake tube and at least two liquid blocking rib groups; the air intake tube comprising an open end and a closed end along its axial direction, and an outer peripheral wall connected between the open end and the closed end;

the open end being provided with an air intake hole communicating the outside with an inner cavity of the air intake tube, the outer peripheral wall being provided with an air guide hole communicating the inner cavity of the air intake tube with the air outlet hole;

wherein all the liquid blocking rib groups are arranged at intervals along the axial direction of the air intake tube, each liquid blocking rib group comprises at least one liquid blocking rib protruding outwards along a radial direction of the air intake tube and arranged along a circumferential direction of the air intake tube, at least one liquid dripping notch is formed between the liquid blocking ribs located on the same circumference;

the liquid dripping notches in adjacent liquid blocking rib groups are staggered from each other along an axial direction of the air intake tube and communicated with each other to form liquid dripping passages.

2. The air intake and liquid blocking structure as claimed in claim 1, wherein the liquid dripping notch formed in the liquid blocking rib group adjacent to the air outlet hole is staggered from the air outlet hole along the axial direction of the air intake tube.

3. The air intake and liquid blocking structure as claimed in claim 1, wherein a surface of the liquid blocking rib of the liquid blocking rib group adjacent to the air outlet hole is a rough surface that faces toward the air outlet hole.

4. The air intake and liquid blocking structure as claimed in claim 1, wherein the number of the air outlet hole provided on the air outlet end is multiple, the closed end of the air intake tube faces toward the multiple air outlet holes, and the projections of the multiple air outlet holes completely fall into the surface of the closed end.

5. The air intake and liquid blocking structure as claimed in claim 1, wherein the air guide hole is located between the at least two liquid blocking rib groups and the air intake hole, and the number of the air guide hole is multiple, which are arranged along the circumferential direction of the air intake tube.

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6. The air intake and liquid blocking structure as claimed in claim 1, wherein the outer sleeve is made of metal material, and the air outlet hole of the outer sleeve faces toward a heating surface of an atomizer.
- 5 7. The air intake and liquid blocking structure as claimed in claim 1, wherein a sealing flange protrudes radially outwards from the outer peripheral wall of the air intake tube adjacent to the open end, the outer sleeve is sealed and sleeved outside the sealing flange and surrounds the air guide hole; wherein there is a gap formed between an inner surface of the outer sleeve and the liquid blocking rib in each liquid blocking rib group, allowing outside air to flow into the atomizing chamber and preventing liquid in the atomizing chamber from flowing out to the outside.
- 10 8. An atomizer, comprising an atomizing assembly provided with an atomizing chamber, and the air intake and liquid blocking structure as claimed in any one of claims 1 to 7.
- 15 9. The atomizer as claimed in claim 8, wherein the atomizing assembly comprises a base provided with the atomizing chamber and an atomizing core installed in the atomizing chamber, the air intake and liquid blocking structure is installed on the base and located below the atomizing core, the air outlet end of the outer sleeve with the air outlet hole extends into the atomizing chamber.
- 20 10. An aerosol generating device, comprising the atomizer as claimed in claim 9.

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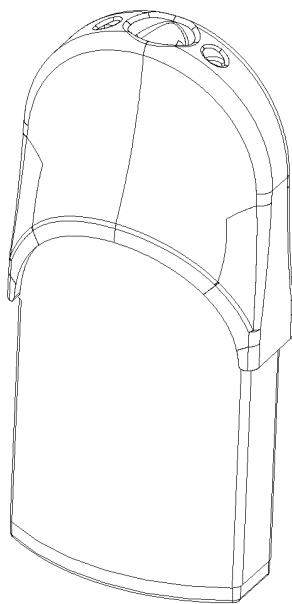


FIG. 1

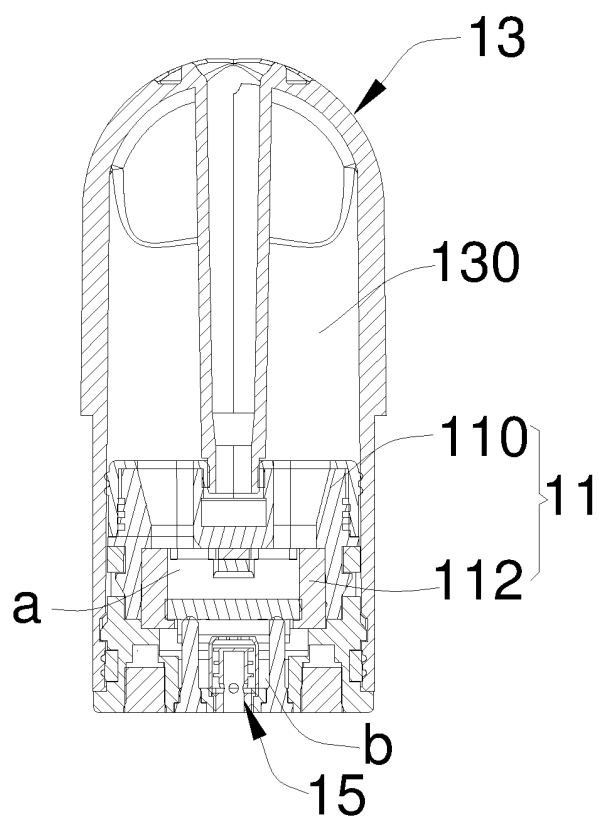


FIG. 2

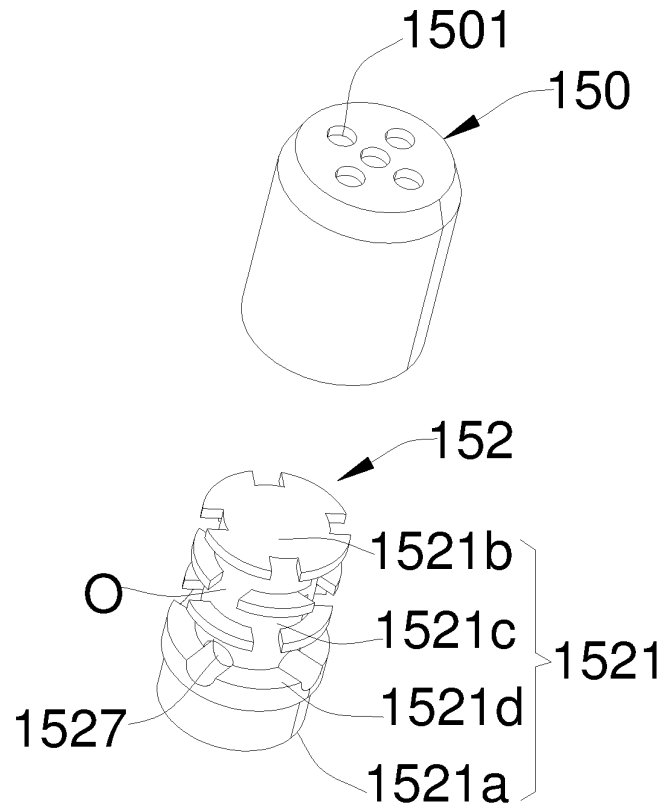


FIG. 3

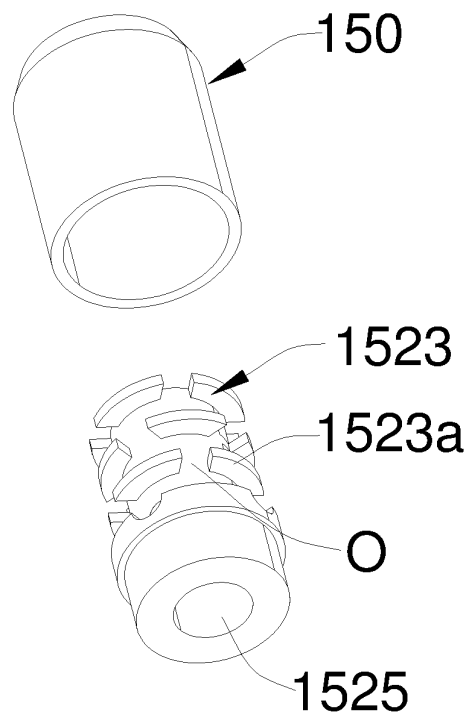


FIG. 4

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2021/111978

A. CLASSIFICATION OF SUBJECT MATTER

A24F 40/40(2020.01)i; A24F 47/00(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)

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)

CNABS; CNTXT; CNKI; VEN; USTXT; EPTXT; WOTXT: 电子烟, 雾化, 气溶胶, 冷凝液, 烟油, 烟液, 渗透, 渗漏, 泄漏, 防止, 预防, 降低, 减少, 以防, 减弱, 表面张力, 麦克韦尔, 常州市派腾, 进气口, 进气孔, 气体, 气流, 通道, 阻液, 阻流, 阻油, 吸收, 基质, liquid, cigarette?, air, gas, inlet?, smok+, oil?, atomiz+, flow, leak+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 209234987 U (SHENZHEN SMOORE TECHNOLOGY LIMITED) 13 August 2019 (2019-08-13) abstract, description paragraphs [0035]-[0048], figures 1-8	1-10
A	CN 211861815 U (SHENZHEN SMOORE TECHNOLOGY LIMITED) 06 November 2020 (2020-11-06) entire document	1-10
A	CN 204579887 U (HUIZHOU KIMREE TECHNOLOGY CO., LTD.) 26 August 2015 (2015-08-26) entire document	1-10
A	CN 111011937 A (SHENZHEN HANGSEN STAR TECHNOLOGY CO., LTD.) 17 April 2020 (2020-04-17) entire document	1-10
A	CN 211482973 U (SHENZHEN FIRST UNION TECHNOLOGY CO., LTD.) 15 September 2020 (2020-09-15) entire document	1-10

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

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Date of the actual completion of the international search

10 September 2021

Date of mailing of the international search report

01 November 2021

Name and mailing address of the ISA/CN

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

Facsimile No. (86-10)62019451

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2021/111978

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 211153819 U (SHENZHEN POOLAN TECHNOLOGY CO., LTD.) 04 August 2020 (2020-08-04) entire document	1-10
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INTERNATIONAL SEARCH REPORT
Information on patent family members

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