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(54) **VAPORIZATION CORE FOR ELECTRONIC CIGARETTE, CARTRIDGE FOR ELECTRONIC CIGARETTE, AND ELECTRONIC CIGARETTE**

(57) The present invention discloses a vaporization core for an electronic cigarette, a cartridge for an electronic cigarette, and an electronic cigarette. The vaporization core includes: a liquid guide body, where the liquid guide body has a liquid guide side surface and a liquid storage side surface opposite to each other, at least a part of the liquid guide side surface forms a liquid absorbing region, at least a part of the liquid storage side surface forms a vaporization region, the liquid guide body includes a liquid storage part, the liquid storage part is a part of the liquid guide body that is between the liquid storage side surface and a part that is obtained through

translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm, and a liquid storage capacity of the liquid storage part being 6 mg to 25 mg or 10 mg to 30 mg; and a heating body, where the heating body is arranged in the vaporization region of the liquid storage side surface. The vaporization core for the electronic cigarette according to the embodiments of the present invention can match liquid capacity required for single-inhalation vaporization, thereby ensuring both the amount of vapor output and the sufficient vaporization of liquid.

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Description

FIELD

[0001] The present invention relates to the field of electronic cigarette technologies, and more specifically, to a vaporization core for an electronic cigarette, a cartridge for an electronic cigarette, and an electronic cigarette.

BACKGROUND

[0002] With the increasingly stringent control and restriction of tobacco all over the world, electronic cigarettes, as a substitute for traditional tobacco, can not only simulate a sensory experience of smoking, but also do far less damage to health than smoking the traditional tobacco, which makes the demand for the electronic cigarettes increase year by year.

[0003] The electronic cigarette usually includes a cartridge and a cigarette rod. The cartridge is installed on the cigarette rod and can generate smoke inhaled by a human body. The cartridge has an e-liquid storage cavity, an airway, a vaporization cavity, and a vaporization core. An e-liquid for generating the smoke is arranged in the e-liquid storage cavity. The e-liquid is heated and vaporized by the vaporization core to form the smoke and enters the vaporization cavity, and then enters the airway through the vaporization cavity to be inhaled by a user.

[0004] In the related art, when the user inhales the electronic cigarette, the user often has a phenomenon of "e-liquid frying" or "burnt core", which seriously affects the taste of the smoke.

SUMMARY

[0005] The present invention aims to resolve at least one of the technical problems in the related art. Therefore, embodiments of the present invention are to provide a vaporization core for an electronic cigarette. When the vaporization core is assembled in the electronic cigarette, vaporized liquid can be fully vaporized when a user inhales, thereby reducing a phenomenon of "e-liquid frying" of the electronic cigarette, avoiding a phenomenon of "burnt core" during inhalation of the user, and having a purer smoke taste.

[0006] The present invention further provides a cartridge for an electronic cigarette with the vaporization core for the electronic cigarette.

[0007] The present invention further provides an electronic cigarette with the cartridge for the electronic cigarette.

[0008] According to embodiments of the first aspect of the present invention, a vaporization core for an electronic cigarette is provided, including: a liquid guide body, where the liquid guide body has a liquid guide side surface and a liquid storage side surface opposite to each other, at least a part of the liquid guide side surface forms a liquid absorbing region, at least a part of the liquid stor-

age side surface forms a vaporization region, the liquid guide body includes a liquid storage part, the liquid storage part is a part of the liquid guide body that is between the liquid storage side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm, and a liquid storage capacity of the liquid storage part is 5 mg to 30 mg; and a heating body, where the heating body is arranged in the vaporization region of the liquid storage side surface.

[0009] In a research process, it has been found that, during inhalation of the electronic cigarette of the related art, the reason why the phenomenon of "e-liquid frying" or burnt core occurs is that after the vaporized liquid in a liquid storage bin of the electronic cigarette enters the vaporization core, a part of the vaporized liquid cannot be fully vaporized, but gathers in a non-vaporized region of the vaporization core. The non-vaporized region of the vaporization core is also heated by the heating body, but it is not enough to vaporize the e-liquid, resulting in "e-liquid frying". During the inhalation of the user, the part of the vaporized liquid is inhaled into a mouth of the user together with the smoke, which seriously affects the taste of the smoke. In the related art, there is also the phenomenon of "burnt core" caused by insufficient vaporized liquid transmitted to the vaporization region, which also seriously affects the taste of the smoke.

[0010] It has been further studied and discovered that a temperature of a part that is between the liquid guide body and a part that is obtained through translating a surface near the vaporization region to a surface of the liquid absorbing region by 0.5 mm to 1.5 mm in actual inhalation can reach the vaporization temperature of the vaporized liquid, that is, the effective vaporization temperature of the vaporized liquid can be reached. The part of the liquid guide body is defined as the liquid storage part and another part is the liquid guide part. By controlling the liquid storage capacity of the liquid storage part, the liquid storage capacity Q1 of the liquid storage part is 5 mg to 30 mg, which can balance with the vaporization capacity of the vaporized liquid of the vaporization core in an inhalation cycle, and can effectively resolve the problem of "e-liquid frying" or "burnt core" during inhalation of the electronic cigarette in the related art, which may seriously affect the inhalation taste of the electronic cigarette.

[0011] According to some embodiments of the present invention, the liquid guide body further includes a liquid guide part, where the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and a liquid storage capacity Q2 of the liquid guide part satisfies: $Q2/Q1=0.5$ to 2.5.

[0012] According to some embodiments of the present invention, the liquid storage capacity Q1 of the liquid storage part = a volume of the liquid storage part $\times$ a porosity

of the liquid storage part $\times$ a density of vaporized liquid; and the liquid storage capacity Q2 of the liquid guide part = a volume V2 of the liquid guide part $\times$ a porosity σ 2 of the liquid guide part $\times$ a density ρ of the vaporized liquid.

[0013] According to some embodiments of the present invention, the liquid guide capacity of the liquid guide part = an area of the liquid absorbing region $\times$ a liquid guide speed rate of the liquid guide part $\times$ inhalation time in an inhalation cycle $\times$ the density of the vaporized liquid.

[0014] According to some embodiments of the present invention, the liquid guide body further includes a liquid guide part, where the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and a liquid guide capacity D1 of the liquid guide part ranges from 2.5 mg to 12 mg.

[0015] According to some embodiments of the present invention, the liquid guide body further includes a liquid guide part, where the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and the liquid guide part and the liquid storage part are separate pieces or an integrated piece.

[0016] According to some embodiments of the present invention, the liquid guide body further includes a liquid guide part, where the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and materials of the liquid guide part and the liquid storage part are the same or different.

[0017] According to some embodiments of the present invention, the liquid guide part is ceramic or e-liquid absorbing cotton; and the liquid storage part is ceramic or e-liquid absorbing cotton.

[0018] According to some embodiments of the present invention, the liquid guide part includes one or more porous ceramic parts; the liquid guide part includes one or more pieces of e-liquid absorbing cotton; or the liquid guide part includes one or more porous ceramic parts and one or more pieces of e-liquid absorbing cotton.

[0019] According to some embodiments of the present invention, the liquid storage part includes one or more porous ceramic parts; or the liquid storage part includes one or more pieces of e-liquid absorbing cotton; or the liquid storage part includes one or more porous ceramic parts and one or more pieces of e-liquid absorbing cotton.

[0020] According to some embodiments of the present invention, the liquid guide body further includes a liquid guide part, where the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and in a plane perpendicular to a direction from the liquid guide side surface to the liquid storage side surface, an orthographic projection area of the liquid guide part is smaller than or equal to an orthographic projection area of the liquid storage part.

ular to a direction from the liquid guide side surface to the liquid storage side surface, an orthographic projection area of the liquid guide part is smaller than or equal to an orthographic projection area of the liquid storage part.

[0021] According to some embodiments of the present invention, the liquid storage part is configured as a cuboid shape; and the liquid guide part is configured as a cuboid shape, a frustum of trapezoid prim shape, or a frustum of triangular prim shape.

[0022] According to some embodiments of the present invention, an area of the liquid absorbing region is smaller than or equal to an area of the vaporization region.

[0023] According to some embodiments of the present invention, the liquid guide side surface is configured as a flat surface, a polyline curved surface, an arc-shaped curved surface, or a spherical surface; and the liquid storage side surface is configured as a flat surface, a polyline curved surface, an arc-shaped curved surface, or a spherical surface.

[0024] According to some embodiments of the present invention, the vaporization core for the electronic cigarette further includes: a vaporization core sealing member, where the vaporization core sealing member is sleeved on the liquid guide body, the vaporization core sealing member has a liquid flowing opening, and at least a part of the liquid guide side surface is exposed from the liquid flowing opening to form the liquid absorbing region.

[0025] According to the embodiments of the second aspect of the present invention, a cartridge for an electronic cigarette is provided, including: a housing, where the housing has a liquid storage cavity, an airway, and a vaporization cavity in communication with the airway, and the housing has an air inlet in communication with the vaporization cavity and an air outlet in communication with the airway. The vaporization core for an electronic cigarette according to the embodiments of the first aspect of the present invention, where the vaporization core is arranged in the housing, the liquid absorbing region of the liquid guide side surface is in communication with the liquid storage cavity, and the vaporization region of the liquid storage side surface is in communication with the vaporization cavity.

[0026] The cartridge for the electronic cigarette according to the embodiments of the second aspect of the present invention can match liquid capacity required for single-inhalation vaporization by utilizing the vaporization core for the electronic cigarette according to the embodiments of the first aspect of the present invention, thereby ensuring both the amount of vapor output and the sufficient vaporization of e-liquid.

[0027] According to the embodiments of a third aspect of the present invention, an electronic cigarette is provided, including: the cartridge according to the embodiments of the second aspect of the present invention; a cigarette rod, where the cigarette rod is provided with an electrical component, the electrical component is electrically connected to the heating body, and the electrical component

is configured to supply power to the heating body.

[0028] The electronic cigarette according to the embodiments of the third aspect of the present invention can match liquid capacity required for single-inhalation vaporization by utilizing the cartridge according to the embodiments of the second aspect of the present invention, thereby ensuring both the amount of vapor output and the sufficient vaporization of the e-liquid.

[0029] Additional aspects and advantages of the present invention will be given in the following description, some of which will become apparent from the following description or may be learned from practices of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0030] The foregoing and/or additional aspects and advantages of the present invention will become apparent and comprehensible from the following descriptions of the embodiments with reference to the accompanying drawings, where:

FIG. 1 is a schematic structural diagram of a cartridge according to an embodiment of the present invention.

FIG. 2 is a schematic structural diagram of another viewing angle of a cartridge according to an embodiment of the present invention.

FIG. 3 is an exploded view of a cartridge according to an embodiment of the present invention.

FIG. 4 is a schematic structural diagram of a liquid guide body of a cartridge according to an embodiment of the present invention.

FIG. 5 is a schematic structural diagram of a liquid guide body of a cartridge according to another embodiment of the present invention.

FIG. 6 is a schematic structural diagram of a liquid guide body of a cartridge according to still another embodiment of the present invention.

FIG. 7 is a schematic structural diagram of a liquid guide body of a cartridge according to still another embodiment of the present invention.

FIG. 8 is a schematic structural diagram of a liquid guide body of a cartridge according to still another embodiment of the present invention.

FIG. 9 is a schematic diagram of a connection between a liquid storage side surface of a cartridge and a heating body according to an embodiment of the present invention.

FIG. 10 is a schematic structural diagram of a vaporization core sealing member of a cartridge according to an embodiment of the present invention.

FIG. 11 is a schematic structural diagram of another viewing angle of a vaporization core sealing member of a cartridge according to an embodiment of the present invention.

FIG. 12 is a cross-sectional view of a vaporization core sealing member of a cartridge according to an

embodiment of the present invention.

Reference marks:

5 **[0031]**

Cartridge 100, Vaporization core 200,
Liquid guide body 1, Liquid guide side surface 11,
Liquid storage side surface 12, Liquid guide part 13,
Liquid storage part 14, Step surface 15,
Heating body 2, Vaporization core sealing member
3, Liquid flowing opening 31,
Housing 4, Liquid storage cavity 41, Vaporization
cavity 42, Airway 43, Air inlet 44, Air outlet 45.

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DETAILED DESCRIPTION

[0032] The embodiments of the present invention are described in detail below, and the embodiments described with reference to accompanying drawings are exemplary.

[0033] In the description of the present invention, it should be understood that, orientations or position relationships indicated by terms such as "center", "longitudinal", "transverse", "length", "width", "thickness", "up", "down", "front", "back", "left", "right", "vertical", "horizontal", "top", "bottom", "inner", "outer", "clockwise", "counterclockwise", "axial", "radial", and "circumferential" are orientations or position relationship shown based on the accompanying drawings, and are merely used for describing the present invention and simplifying the description, rather than indicating or implying that the apparatus or element should have a particular orientation or be constructed and operated in a particular orientation, and therefore, should not be construed as a limitation on the present invention.

[0034] In the description of the invention, "a plurality of" means two or more.

[0035] A cartridge 100 for an electronic cigarette according to an embodiment of the present invention is described with reference to accompanying drawings.

[0036] As shown in FIG. 1 to FIG. 12, the cartridge 100 includes a housing 4 and a vaporization core 200 for an electronic cigarette according to the following embodiments of the present invention.

[0037] A housing 4 has a liquid storage cavity 41, an airway 43, and a vaporization cavity 42 in communication with the airway 43, the housing 4 has an air inlet 44 in communication with the vaporization cavity 42 and an air outlet 45 in communication with the airway 43, and the vaporization core 200 is arranged in the housing 4.

[0038] The vaporization core 200 for the electronic cigarette according to an embodiment of the present invention is described the first reference to accompanying drawings.

[0039] As shown in FIG. 1 to FIG. 12, the vaporization core 200 for the electronic cigarette according to the embodiments of the present invention includes a liquid guide

body 1 and a heating body 2.

[0040] The liquid guide body 1 has a liquid guide side surface 11 and a liquid storage side surface 12 opposite to each other, at least a part of the liquid guide side surface 11 forms a liquid absorbing region, at least a part of the liquid storage side surface 12 forms a vaporization region, the liquid guide body 1 includes a liquid storage part 14, where the liquid storage part 14 is a part of the liquid guide body 1 that is between the liquid storage side surface 12 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm to 1.5 mm.

[0041] It should be noted that, a distance between a boundary surface of the liquid storage part 14 (shown by dashed lines in FIG. 4, FIG. 5 and FIG. 7) and the liquid storage side surface 12 is 0.5 mm to 1.5 mm, a part between the liquid storage side surface 12 and the boundary surface is defined as the liquid storage part 14, and a shape of the boundary surface follows that of the liquid storage side surface 12. That is, if the liquid storage side surface 12 is a curved surface, the boundary surface is a curved surface (as shown in FIG. 4 and FIG. 5), and if the liquid storage side surface 12 is a flat surface, the boundary surface is a flat surface (as shown in FIG. 7). Certainly, the liquid storage side surface 12 and the boundary surface may further be constructed as surfaces of other shapes. That is, regardless of the shape of the liquid storage side surface 12, the liquid storage part 14 has a volume defined by the liquid storage side surface 12 that translates in a direction of the liquid guide side surface 11 by 0.5 mm to 1.5 mm.

[0042] In addition, the liquid guide side surface 11 may be constructed as a surface of different shapes, such as a flat surface as shown in FIG. 4, or a curved surface as shown in FIG. 5.

[0043] A liquid storage capacity of the liquid storage part 14 ranges from 5 mg to 30 mg, and a heating body 2 is arranged in a vaporization region 12 of the liquid storage side surface.

[0044] The liquid absorbing region of the liquid guide side surface 11 is in communication with a liquid storage cavity 41, and the liquid absorbing region may absorb e-liquid from the liquid storage cavity 41, and is heated and vaporized by the heating body 2 arranged on the liquid storage side surface 12. The vaporization region of the liquid storage side surface 12 is in communication with a vaporization cavity 42.

[0045] For example, the liquid storage capacity of the liquid storage part 14 is calculated as follows: the liquid storage capacity of the liquid storage part 14 ranges from 5 mg to 30 mg, and the liquid storage capacity of the liquid storage part 14 is calculated as follows: a volume of the liquid storage part 14 $\times$ a porosity of the liquid storage part 14 $\times$ a density of a vaporized liquid, where the vaporized liquid is an e-liquid commonly used in the field of electronic cigarettes, and a density of the e-liquid generally ranges from 1.05 kg/m³ to 1.2 kg/m³ according to the embodiments of the present invention. In addition,

the liquid storage capacity of the liquid storage part 14 may range from 6 mg to 28 mg, 8 mg to 25 mg, 10 mg to 23 mg, 12 mg to 21 mg, 14 mg to 19 mg, 15 mg to 17 mg, for example, 5 mg, 10 mg, 15 mg, 20 mg, 25 mg, or 30 mg. The liquid storage part 14 may be a part of the liquid guide body 1 that is between the liquid storage side surface 12 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm, 0.6 mm, 0.7 mm, 0.8 mm, 0.9 mm, 1.0 mm, 1.1 mm, 1.2 mm, 1.3 mm, 1.4 mm, or 1.5 mm.

[0046] According to the vaporization core of an embodiment of the present invention, the liquid guide body 1 is shown in FIG. 8, and the volume of the liquid storage part 14 is calculated as follows: an area of the liquid storage side surface 12 $\times$ a height of the liquid storage part 14, where the height of the liquid storage part 14 refers to a dimension of the liquid storage part in an extending direction from the liquid storage side surface to the liquid guide side surface. In this embodiment, the area of the liquid storage side surface 12 = a length of the liquid storage side surface $\times$ a width of the liquid storage side surface.

[0047] In this embodiment, the liquid guide part 13 and the liquid storage part 14 are both porous ceramic bodies, and the liquid guide part 13 and the liquid storage part 14 have the same porosity. The measurement method of the porosity of the porous ceramic body is a conventional measurement method in the art, for example, the measurement method of the porosity of the porous ceramic body may be based on an apparent porosity test method of the porous ceramic in GBT1966-1996.

[0048] According to the vaporization core 200 for the electronic cigarette according to the embodiments of the present invention, the heating body 2 is arranged in the vaporization region of the liquid storage side surface 12, that is, after the e-liquid absorbed by the liquid absorbing region permeates to a surface of the vaporization region, smoke (including, but is not limited to aerosol, suspended liquid, low-temperature vapor, and volatile gas) is heated by the heating body 2 and enters the vaporization cavity 42. When a user inhales the electronic cigarette, outside air enters the vaporization cavity 42 and is mixed with the air in the vaporization cavity 42, to be inhaled by the user.

[0049] The vaporization core 200 for the electronic cigarette according to the embodiments of the present invention, it has been discovered the phenomena such as "e-liquid frying" or "burnt core" in the related art occurs because the liquid capacity required by a user for a single inhalation does not match the liquid capacity effectively vaporized by the vaporization core.

[0050] Based on this, it is first thought of calculating the liquid capacity required for single-inhalation vaporization. In a large number of experiments and studies, it has been found that an average time for the user to inhale the electronic cigarette each time is 3 seconds, and an average of liquid capacity consumed by the user to inhale the electronic cigarette each time is about 5 mg to 10 mg.

[0051] In addition, based on the foregoing description, after thorough studies, it has been found that a temperature of a part of the liquid guide body 1 that is between the liquid storage side surface 12 and a part that is obtained through translating the liquid storage side surface 12 (the surface on which the vaporization region is arranged) to the liquid guide side surface 11 by 0.5 mm to 1.5 mm can reach a vaporization temperature of the vaporized liquid. The temperature of this part is an effective vaporization temperature, that is, the vaporized liquid stored in the part can be sufficiently vaporized, and the part of the liquid guide body 1 is defined as the liquid storage part 14.

[0052] Further, it has further studied a relationship between the liquid storage capacity of the liquid storage part 14 and the phenomenon of "e-liquid frying". When the liquid storage capacity of the liquid storage part 14 is 1 to 3 times of the liquid capacity required for the single-inhalation vaporization, it has found that a match can be formed. Therefore, the liquid storage capacity of the liquid storage part 14 is set to 5 mg to 30 mg.

[0053] In this way, liquid capacity stored in the vaporization core 200 is matched with the liquid capacity required by the user for a single vaporization, which can not only ensure sufficient liquid to ensure the amount of vapor output, but also avoid excessive liquid that cannot be fully vaporized, thereby preventing liquid that are not vaporized from penetrating into the vaporization region and accidentally gathering to cause the phenomenon such as "e-liquid frying" and "burnt core", ensuring the demand of inhalation, preventing liquid leakage, and improving the user experience.

[0054] Therefore, the vaporization core 200 for the electronic cigarette according to the embodiments of the present invention can match liquid capacity required for single-inhalation vaporization, thereby ensuring both the amount of vapor output and the sufficient vaporization of liquid.

[0055] The cartridge 200 for the electronic cigarette according to the embodiments of the present invention can match liquid capacity required for single-inhalation vaporization by utilizing the vaporization core 100 for the electronic cigarette according to the foregoing embodiments of the present invention, thereby ensuring both the amount of vapor output and the sufficient vaporization of the e-liquid.

[0056] According to some specific embodiments of the present invention, as shown in FIG. 4 to FIG. 8, the liquid guide body 1 further includes a liquid guide part 13, and the liquid guide part 13 is a part of the liquid guide body 1 that is between the liquid guide side surface 11 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm to 1.5 mm; and the liquid storage capacity Q2 of the liquid guide part satisfies: $Q2/Q1=0.5$ to 2.5 , for example, the liquid storage capacity of the liquid guide part 13 is 0.5 times, 0.6 times, 0.7 times, 0.8 times, 0.9 times, 0.10 times, 1.1 times, 1.2 times, 1.3 times, 1.4 times, 1.5 times,

2 times, or 2.5 times of the liquid storage capacity of the liquid storage part 14.

[0057] The liquid guide part 13 can lengthen a path of the absorption and the permeation of the e-liquid by the liquid guide body 1 and increase e-liquid capacity for the vaporization, and the liquid guide part 13 may be a part of the liquid guide body 1 that is between the liquid guide side surface 11 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm, 0.6 mm, 0.7 mm, 0.8 mm, 0.9 mm, 1.0 mm, 1.1 mm, 1.2 mm, 1.3 mm, 1.4 mm, or 1.5 mm.

[0058] For example, the liquid storage capacity of the liquid guide part 13 is calculated as follows: the volume of the liquid guide part 13 $\times$ the porosity of the liquid guide part 13 $\times$ the density of the vaporized liquid, where the vaporized liquid is an e-liquid commonly used in the field of electronic cigarettes, and a density of the e-liquid generally ranges from 1.05 kg/m^3 to 1.2 kg/m^3 according to the embodiments of the present invention.

[0059] According to the vaporization core of an embodiment of the present invention, the liquid guide body 1 is shown in FIG. 8, and the volume of the liquid guide part 13 is calculated as follows: an area of the liquid guide side surface 11 $\times$ a height of the liquid guide part 13, where the height of the liquid guide part 13 refers to a dimension of the liquid guide part in an extending direction from the liquid guide side surface 11 to the liquid storage side surface 12. In this embodiment, the area of the liquid guide side surface 11 = a length of the liquid guide side surface 11 $\times$ a width of the liquid guide side surface 11.

[0060] In this embodiment, the liquid guide part 13 and the liquid storage part 14 are both porous ceramic bodies, and the liquid guide part 13 and the liquid storage part 14 have the same porosity. The measurement method of the porosity of the porous ceramic body is a conventional measurement method in the art, for example, the measurement method of the porosity of the porous ceramic body may be based on an apparent porosity test method of the porous ceramic in GBT1966-1996.

[0061] In this way, the liquid guide capacity of the liquid guide part 13 can satisfy a supplementary demand for the liquid storage capacity of the liquid storage part 14. By controlling the liquid guide capacity of the liquid guide part 13, the liquid storage capacity of the liquid storage part 14 can be matched with the single-inhalation vaporization capacity, which not only ensures that the vaporized liquid is fully vaporized and the vaporization capacity is stable, but also ensures that the e-liquid in the liquid guide part 13 can be supplemented to the liquid storage part 14 in a timely and appropriate amount, that is, it can effectively resolve the problem of "e-liquid frying" or "burnt core" during inhalation of the electronic cigarette in the related art, which may seriously affect the inhalation taste of the electronic cigarette.

[0062] In addition, the liquid guide capacity of the liquid guide part 13 is D1, and $D1 \leq Q2 \leq 3D1$. In this way, a ratio

of the liquid guide capacity and the liquid storage capacity of the liquid guide part 13 can satisfy a supplementary demand for the liquid storage capacity of the liquid storage part 14. By controlling the ratio of the liquid guide capacity and the liquid storage capacity of the liquid guide part 13, the liquid storage capacity of the liquid storage part 14 can be matched with the single-inhalation vaporization capacity, which not only ensures that the vaporized liquid is fully vaporized and the vaporization capacity is stable, but also ensures that the e-liquid in the liquid guide part 13 can be supplemented to the liquid storage part 14 in a timely and appropriate amount, that is, it can effectively resolve the problem of "e-liquid frying" or "burnt core" during inhalation of the electronic cigarette in the related art, which may seriously affect the inhalation taste of the electronic cigarette.

[0063] According to some specific embodiments of the present invention, as shown in FIG. 4 to FIG. 8, the liquid guide body 1 further includes a liquid guide part 13, and the liquid guide part 13 is a part of the liquid guide body 1 that is between the liquid guide side surface 11 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm to 1.5 mm; and the liquid guide capacity of the liquid guide part 13 ranges from 2.5 mg to 12 mg, for example, the liquid guide capacity of the liquid guide part 13 is 2.5 mg, 3 mg, 3.5 mg, 4 mg, 4.5 mg, 5 mg, 5.5 mg, 6 mg, 6.5 mg, 7 mg, 7.5 mg, 8 mg, 8.5 mg, 9 mg, 9.5 mg, 10 mg, 10.5 mg, 11 mg, 11.5 mg, or 12 mg.

[0064] The liquid guide part 13 can lengthen a path of the absorption and the permeation of the vaporized liquid by the liquid guide body 1 and increase vaporized liquid capacity for the vaporization, and the liquid storage part 13 may be a part of the liquid guide body 1 that is between the liquid guide side surface 11 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm, 0.6 mm, 0.7 mm, 0.8 mm, 0.9 mm, 1.0 mm, 1.1 mm, 1.2 mm, 1.3 mm, 1.4 mm, or 1.5 mm.

[0065] For example, the liquid guide capacity of the liquid guide part 13 is calculated as follows: a liquid guide speed of the liquid guide part 13 $\times$ an area of the liquid absorbing region $\times$ an inhalation time in one inhalation cycle (for example, 3S) $\times$ a density of the vaporized liquid, where the density of the vaporized liquid is 1.05 kg/m³ to 1.2 kg/m³.

[0066] An example is given to describe a test method of a single-inhalation vaporization capacity: the single-inhalation vaporization capacity is usually measured according to GB41700-2022, where an inhalation duration specified by "single-inhalation" is (3.0 $\pm$ 0.1) s, and a total inhalation flow rate is (55 $\pm$ 0.6) ml. The electronic cigarette emissions are collected with a glass fiber filters, and the glass fiber filter before and after inhalation is weighed on an analytical balance with sensitivity $\leq$ 0.1 mg. The mass difference is the single-inhalation vaporization capacity, and a unit thereof is mg.

[0067] An example is given to describe a method for

measuring a liquid guide speed of the liquid guide part 13: a dry liquid guide part 13 to be tested having a height of h is fixed on a clamp and held horizontally, and each generatrix of the liquid guide part 13 is ensured to be vertically upward. Two or three drops of the e-liquid are rapidly dripped at a central position above the liquid guide part 13, a time t from a moment at which the e-liquid comes into contact with an upper area of the liquid guide part 13 to a moment at which the e-liquid penetrates into a lower area of the liquid guide part 13 is recorded, and t/h is the liquid guide speed of the measured liquid guide body, and a unit thereof is mm/s.

[0068] According to the embodiments of the present invention, as shown in FIG. 8, the area of the liquid absorbing region = the area of the liquid guide side surface 11 = a length of the liquid guide side surface 11 $\times$ a width of the liquid guide side surface 11.

[0069] In this way, the liquid guide capacity of the liquid guide part 13 can satisfy a supplementary demand for the liquid storage capacity of the liquid storage part 14. By controlling the liquid guide capacity of the liquid guide part 13, the liquid storage capacity of the liquid storage part 14 can be matched with the single-inhalation vaporization capacity, which not only ensures that the vaporized liquid is fully vaporized and the vaporization capacity is stable, but also ensures that the e-liquid in the liquid guide part 13 can be supplemented to the liquid storage part 14 in a timely and appropriate amount, that is, it can effectively resolve the problem of "e-liquid frying" or "burnt core" during inhalation of the electronic cigarette in the related art, which may seriously affect the inhalation taste of the electronic cigarette.

[0070] According to some exemplary embodiments of the present invention, as shown in FIG. 4 to FIG. 8, the liquid guide body 1 further includes a liquid guide part 13, where the liquid guide part 13 is a part of the liquid guide body 1 that is between the liquid guide side surface 11 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm to 1.5 mm; and the liquid guide part 13 and the liquid storage part 14 are separate pieces or an integrated piece.

[0071] Since the liquid guide body 1 is divided into the liquid guide part 13 and the liquid storage part 14, the liquid guide part 13 and the liquid storage part 14 may be integrally formed to reduce manufacturing difficulty. In an example, the liquid guide part 13 and the liquid storage part 14 are arranged separately, and the configurations of the liquid guide part 13 and the liquid storage part 14 are more diverse, so that the applicability of the liquid guide body 1 is improved, and both costs and vaporization efficiency are taken into account.

[0072] The liquid guide part 13 can lengthen a path of the absorption and the permeation of the e-liquid by the liquid guide body 1 and increase e-liquid capacity for the vaporization, and the liquid guide part 13 may be a part of the liquid guide body 1 that is between the liquid guide side surface 11 and a part that is obtained through trans-

lating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm, 0.6 mm, 0.7 mm, 0.8 mm, 0.9 mm, 1.0 mm, 1.1 mm, 1.2 mm, 1.3 mm, 1.4 mm, or 1.5 mm.

[0073] According to some specific embodiments of the present invention, as shown in FIG. 4 to FIG. 8, the liquid guide body 1 further includes a liquid guide part 13, where the liquid guide part 13 is a part of the liquid guide body 1 that is between the liquid guide side surface 11 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm to 1.5 mm. Materials of the liquid guide part 13 and liquid storage part 14 are the same or different.

[0074] The liquid guide part 13 can lengthen a path of the absorption and the permeation of the e-liquid by the liquid guide body 1 and increase e-liquid capacity for the vaporization, and the liquid guide part 13 may be a part of the liquid guide body 1 that is between the liquid guide side surface 11 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm, 0.6 mm, 0.7 mm, 0.8 mm, 0.9 mm, 1.0 mm, 1.1 mm, 1.2 mm, 1.3 mm, 1.4 mm, or 1.5 mm.

[0075] Since the liquid guide body 1 is divided into the liquid guide part 13 and the liquid storage part 14, the liquid guide part 13 and the liquid storage part 14 can be made of different materials, and the liquid guide part 13 may be made of a material having high liquid absorption capacity, while the liquid storage part 14 may be made of a material having high temperature resistance.

[0076] In some embodiments, the liquid guide part 13 and the liquid storage part 14 are made of the same material, but the liquid guide part 13 and the liquid storage part 14 have different parameters such as the cross-sectional area, the volume, the height, or the shape, so that the applicability of the liquid guide body 1 is improved, and both costs and vaporization efficiency are taken into account.

[0077] In an example, in order to ensure the structural strength and the high temperature resistance of the liquid storage part 14, the liquid storage part 14 may be made of a ceramic material, for example, the liquid storage part 14 includes one or more porous ceramic parts. In order to improve the efficiency of absorption and permeation of the e-liquid by the liquid guide part 13, the liquid guide part 13 may be a ceramic, for example, the liquid guide part 13 includes one or more porous ceramic parts. The liquid guide part 13 and the liquid storage part 14 may be an integral porous ceramic body integrally molded.

[0078] In some embodiments, the liquid guide part 13 and the liquid storage part 14 may be e-liquid absorbing cotton, for example, the liquid storage part 14 includes one or more pieces of e-liquid absorbing cotton, the liquid guide part 13 includes one or more pieces of e-liquid absorbing cotton, and the liquid guide part 13 and the liquid storage part 14 may be integrally molded, so that the cost is low and a mounting space is small.

[0079] In some embodiments, one of the liquid guide

part 13 and the liquid storage part 14 is a ceramic and the other is e-liquid absorbing cotton, and the e-liquid absorbing cotton may be bonded to the ceramic, for example, the liquid guide part 13 includes one or more porous ceramic parts and one or more pieces of e-liquid absorbing cotton, and the liquid guide part 14 includes one or more porous ceramic parts and one or more pieces of e-liquid absorbing cotton. In this way, the cost, the mounting space, and the efficiency of absorbing and penetrating e-liquid are taken into account.

[0080] According to some specific embodiments of the present invention, as shown in FIG. 6 and FIG. 8, the liquid guide body 1 further includes a liquid guide part 13, where the liquid guide part 13 is a part of the liquid guide body 1 that is between the liquid guide side surface 11 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm to 1.5 mm. In a plane perpendicular to a direction from the liquid guide side surface 11 to the liquid storage side surface 12, an orthographic projection area of the liquid guide part 13 is smaller than or equal to an orthographic projection area of the liquid storage part 14.

[0081] Since the liquid guide body 1 is divided into the liquid guide part 13 and the liquid storage part 14, the liquid guide part 13 and the liquid storage part 14 can be made of different materials, and the liquid guide part 13 may be made of a material having high liquid absorption capacity, while the liquid storage part 14 may be made of a material having high temperature resistance.

[0082] The liquid guide part 13 can lengthen a path of the absorption and the permeation of the e-liquid by the liquid guide body 1 and increase e-liquid capacity for the vaporization, and the liquid guide part 13 may be a part of the liquid guide body 1 that is between the liquid guide side surface 11 and a part that is obtained through translating the liquid storage side surface 12 to the liquid guide side surface 11 by 0.5 mm, 0.6 mm, 0.7 mm, 0.8 mm, 0.9 mm, 1.0 mm, 1.1 mm, 1.2 mm, 1.3 mm, 1.4 mm, or 1.5 mm.

[0083] In the plane perpendicular to the direction from the liquid guide side surface 11 to the liquid storage side surface 12, since the orthographic projection area of the liquid guide part 13 is smaller than the orthographic projection area of the liquid storage part 14, a step surface 15 located in a circumferential direction of the liquid guide part 13 may be formed between the liquid guide part 13 and the liquid storage part 14, thereby improving the liquid absorption efficiency of the liquid guide part 13 and ensuring the vaporization effect and stability of the e-liquid by the heating body 2 on the liquid storage part 14.

[0084] According to some exemplary embodiments of the present invention, as shown in FIG. 6, the liquid storage part is 14 configured as a cuboid shape, and the liquid guide part is 13 configured as a cuboid shape, a frustum of trapezoid prim shape, or a frustum of triangular prim shape. In an example, the liquid guide part 13 is arranged in a more diverse way, which can be applied to different use scenarios. A surface of the liquid guide

part 13 connected to the liquid storage part 14 is a flat surface, which facilitates the connection between the liquid storage part 14 and the liquid guide part 13.

[0085] According to some exemplary embodiments of the present invention, as shown in FIG. 6 and FIG. 8, an area of the liquid absorbing region is smaller than or equal to an area of the vaporization region. That is, the e-liquid absorbed by the liquid absorbing region may fully penetrate to at least part of the surface of the vaporization region, so that the e-liquid absorbed by the liquid absorbing region may be prevented from accumulating in a low temperature area outside the vaporization region due to excessive penetration, resulting in "e-liquid frying", thereby preventing liquid leakage, improving the utilization efficiency of the e-liquid absorbed by the liquid absorbing region, ensuring the vaporization purity of the smoke in the vaporization cavity 42, and improving the inhalation experience of the user.

[0086] In an example, the area of the liquid absorbing region is 9% to 95% of the area of the vaporization region, for example, the area of the liquid absorbing region may be 9%, 20%, 30%, 40%, or 50% of the area of the vaporization region, to ensure the utilization efficiency of the e-liquid absorbed by the liquid absorbing region. Considering requirements of vaporization capacity of the vaporization region, the area of the liquid absorbing region may be set to be close to the area of the vaporization region, for example, the area of the liquid absorbing region may be 60%, 70%, 80%, 90%, or 95% of the area of the vaporization region.

[0087] According to some exemplary embodiments of the present invention, as shown in FIG. 4 to FIG. 8, the liquid guide side surface 11 is configured as a flat surface, a polyline curved surface, an arc-shaped curved surface, or a spherical surface. When the liquid guide side surface 11 is the flat surface, the shape of the liquid guide side surface 11 is more regular, which is convenient for processing and manufacturing. When the liquid guide side surface 11 is the polyline curved surface, the arc-shaped curved surface, or the spherical surface, the absorbing area of the liquid absorbing region on the liquid storage part 14 may be increased to improve the liquid absorption efficiency.

[0088] In addition, the liquid storage side surface 12 is configured as a flat surface, a polyline curved surface, an arc-shaped curved surface, or a spherical surface. When the liquid storage side surface 12 is the flat surface, the shape of the liquid storage side surface 12 is more regular, which is convenient for processing and manufacturing. When the liquid storage side surface 12 is the polyline curved surface, the arc-shaped curved surface, or the spherical surface, a heating area of the vaporization region on the liquid storage part 14 may be increased to improve the vaporization efficiency, so that a vaporization volume of the e-liquid on the vaporization region may reach 95% to 98% of a volume of the e-liquid on the liquid storage side surface 12, which effectively avoids generation of vaporization condensate.

[0089] As shown in FIG. 4 to FIG. 5, schematic diagrams of a two-dimensional arc-shaped curved surface of a liquid storage side surface 12 are given.

[0090] According to some exemplary embodiments of the present invention, as shown in FIG. 10 to FIG. 12, the vaporization core 200 for the electronic cigarette further includes a vaporization core sealing member 3, where the vaporization core sealing member 3 is sleeved on the liquid guide body 1, the vaporization core sealing member 3 has a liquid flowing opening 31, and the at least a part of the liquid guide side surface 11 is exposed from the liquid flowing opening 31 to form a liquid absorbing region.

[0091] In this way, on the one hand, the vaporization core sealing member 3 may seal a circumferential gap of the liquid guide body 1, so that the e-liquid in the liquid storage cavity 41 is prevented from leaking directly into the vaporization cavity 42 through the circumferential gap of the liquid guide body 1 without passing through the liquid guide body 1, thereby ensuring the vaporization rate of the e-liquid and thus ensuring the utilization rate of the e-liquid. On the other hand, the liquid flowing opening 31 is arranged to enable the e-liquid in the liquid storage cavity 41 to be in contact with the liquid guide body 1, so that the e-liquid easily flows to the liquid absorbing region through the liquid flowing opening 31.

[0092] An electronic cigarette according to an embodiment of the present invention is described with reference to accompanying drawings, and the electronic cigarette includes the cartridge 100 according to the foregoing embodiments of the present invention and a cigarette rod.

[0093] According to the electronic cigarette in the embodiments of the present invention, by utilizing the cartridge 100 according to the foregoing embodiments of the present invention, liquid capacity required for single-inhalation vaporization can be matched, thereby ensuring both the amount of vapor output and the sufficient vaporization of the e-liquid.

[0094] Other configurations and operations of the vaporization core 200 for the electronic cigarette, the cartridge 100 for the electronic cigarette, and the electronic cigarette according to the embodiments of the present invention are known to those of ordinary skill in the art, and the details are not described herein again.

[0095] In the descriptions of this specification, descriptions using reference terms "an embodiment", "some embodiments", "an exemplary embodiment", "an example", "a specific example", or "some examples" mean that specific characteristics, structures, materials, or features described with reference to the embodiment or example are included in at least one embodiment or example of the present invention. In this specification, schematic descriptions of the foregoing terms are not necessarily directed at a same embodiment or example.

[0096] Although the embodiments of the present invention have been shown and described, a person of ordinary skill in the art should understand that various changes, modifications, replacements and variations

may be made to the embodiments without departing from the principles and spirit of the present invention, and the scope of the present invention is as defined by the appended claims and their equivalents.

[0097] The disclosure of the present application also includes the following numbered clauses:

1. A vaporization core for an electronic cigarette, comprising:

a liquid guide body having a liquid guide side surface and a liquid storage side surface provided opposite to each other, at least a part of the liquid guide side surface forming a liquid absorbing region, at least a part of the liquid storage side surface forming a vaporization region, the liquid guide body comprising a liquid storage part, the liquid storage part being a part of the liquid guide body that is between the liquid storage side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm, and a liquid storage capacity Q1 of the liquid storage part being 5 mg to 30 mg; and a heating body arranged in the vaporization region of the liquid storage side surface.

2. The vaporization core for the electronic cigarette according to clause 1, wherein the liquid guide body further comprises a liquid guide part, wherein the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and a liquid storage capacity Q2 of the liquid guide part satisfies: $Q2/Q1=0.5$ to 2.5.

3. The vaporization core for the electronic cigarette according to clause 2, wherein the liquid storage capacity Q1 of the liquid storage part satisfies: $Q1 = \text{a volume of the liquid storage part} \times \text{a porosity of the liquid storage part} \times \text{a density of vaporized liquid}$; and the liquid storage capacity Q2 of the liquid guide part satisfies: $Q2 = \text{a volume V2 of the liquid guide part} \times \text{a porosity } \sigma 2 \text{ of the liquid guide part} \times \text{a density } \rho \text{ of the vaporized liquid}$.

4. The vaporization core for the electronic cigarette according to clause 1, wherein the liquid guide body further comprises a liquid guide part, wherein the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and a liquid guide capacity D1 of the liquid guide part ranges from 2.5 mg to 12 mg.

5. The vaporization core for the electronic cigarette according to clause 4, wherein the liquid guide capacity of the liquid guide part = an area of the liquid absorbing region $\times$ a liquid guide speed rate of the liquid guide part $\times$ inhalation time in an inhalation cycle $\times$ a density of the vaporized liquid.

6. The vaporization core for the electronic cigarette according to clause 1, wherein the liquid guide body further comprises a liquid guide part, wherein the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and the liquid guide part and the liquid storage part are separate pieces or an integrated piece.

7. The vaporization core for the electronic cigarette according to clause 1, wherein the liquid guide body further comprises a liquid guide part, wherein the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and materials of the liquid guide part and the liquid storage part are the same or different.

8. The vaporization core for the electronic cigarette according to clause 7, wherein the liquid guide part is ceramic or e-liquid absorbing cotton; and the liquid storage part is ceramic or e-liquid absorbing cotton.

9. The vaporization core for the electronic cigarette according to clause 7, wherein:

the liquid guide part comprises one or more porous ceramic parts; or
the liquid guide part comprises one or more pieces of e-liquid absorbing cotton; or
the liquid guide part comprises one or more porous ceramic parts and one or more pieces of e-liquid absorbing cotton.

10. The vaporization core for the electronic cigarette according to clause 1, wherein:

the liquid storage part comprises one or more porous ceramic parts; or
the liquid storage part comprises one or more pieces of e-liquid absorbing cotton; or
the liquid storage part comprises one or more porous ceramic parts and one or more pieces of e-liquid absorbing cotton.

11. The vaporization core for the electronic cigarette

according to clause 1, wherein the liquid guide body further comprises a liquid guide part, wherein the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and

in a plane perpendicular to a direction from the liquid guide side surface to the liquid storage side surface, an orthographic projection area of the liquid guide part is smaller than or equal to an orthographic projection area of the liquid storage part.

12. The vaporization core for the electronic cigarette according to clause 11, wherein the liquid storage part is configured as a cuboid shape; and the liquid guide part is configured as a cuboid shape, a frustum of trapezoid prim shape, or a frustum of triangular prim shape.

13. The vaporization core for the electronic cigarette according to clause 1, wherein:

an area of the liquid absorbing region is smaller than or equal to an area of the vaporization region; or

the liquid guide side surface is configured as a flat surface, a polyline curved surface, an arc-shaped curved surface, or a spherical surface, and the liquid storage side surface is configured as a flat surface, a polyline curved surface, an arc-shaped curved surface, or a spherical surface; or

the vaporization core for the electronic cigarette further comprises a vaporization core sealing member, wherein the vaporization core sealing member is sleeved on the liquid guide body, the vaporization core sealing member has a liquid flowing opening, and the at least part of the liquid guide side surface is exposed from the liquid flowing opening to form the liquid absorbing region.

14. A cartridge for an electronic cigarette, comprising:

a housing, wherein the housing has a liquid storage cavity, an airway, and a vaporization cavity in communication with the airway, and the housing has an air inlet in communication with the vaporization cavity and an air outlet in communication with the airway; and the vaporization core for the electronic cigarette according to any one of clauses 1 to 13, wherein the vaporization core is arranged in the housing, the liquid absorbing region of the liquid guide side surface is in communication with the liquid storage cavity, and the vaporization region of

the liquid storage side surface is in communication with the vaporization cavity.

15. An electronic cigarette, comprising:

the cartridge according to clause 14; and a cigarette rod, wherein the cigarette rod is provided with an electrical component, the electrical component is electrically connected to the heating body, and the electrical component is configured to supply power to the heating body.

Claims

1. A vaporization core for an electronic cigarette, comprising:

a liquid guide body having a liquid guide side surface and a liquid storage side surface provided opposite to each other, at least a part of the liquid guide side surface forming a liquid absorbing region, at least a part of the liquid storage side surface forming a vaporization region, the liquid guide body comprising a liquid storage part, the liquid storage part being a part of the liquid guide body that is between the liquid storage side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm, and a liquid storage capacity Q1 of the liquid storage part being 6 mg to 25 mg or 10 mg to 30 mg; and a heating body arranged in the vaporization region of the liquid storage side surface.

2. The vaporization core for the electronic cigarette according to claim 1, wherein the liquid guide body further comprises a liquid guide part, wherein the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and

a liquid storage capacity Q2 of the liquid guide part satisfies: $Q2/Q1=0.5$ to 2.5 .

3. The vaporization core for the electronic cigarette according to claim 2, wherein the liquid storage capacity Q1 of the liquid storage part satisfies: $Q1 = \text{a volume of the liquid storage part} \times \text{a porosity of the liquid storage part} \times \text{a density of vaporized liquid}$; and the liquid storage capacity Q2 of the liquid guide part satisfies: $Q2 = \text{a volume V2 of the liquid guide part} \times \text{a porosity } \sigma_2 \text{ of the liquid guide part} \times \text{a density } \rho \text{ of the vaporized liquid}$.

4. The vaporization core for the electronic cigarette ac-

cording to claim 1, wherein the liquid guide body further comprises a liquid guide part, wherein the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and
a liquid guide capacity D1 of the liquid guide part ranges from 2.5 mg to 12 mg.

5. The vaporization core for the electronic cigarette according to claim 4, wherein the liquid guide capacity of the liquid guide part = an area of the liquid absorbing region $\times$ a liquid guide speed rate of the liquid guide part $\times$ inhalation time in an inhalation cycle $\times$ a density of the vaporized liquid.
6. The vaporization core for the electronic cigarette according to claim 1, wherein the liquid guide body further comprises a liquid guide part, wherein the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and
the liquid guide part and the liquid storage part are separate pieces or an integrated piece.
7. The vaporization core for the electronic cigarette according to claim 1, wherein the liquid guide body further comprises a liquid guide part, wherein the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and
materials of the liquid guide part and the liquid storage part are the same or different.
8. The vaporization core for the electronic cigarette according to claim 7, wherein the liquid guide part is ceramic or e-liquid absorbing cotton; and
the liquid storage part is ceramic or e-liquid absorbing cotton.
9. The vaporization core for the electronic cigarette according to claim 7, wherein:

the liquid guide part comprises one or more porous ceramic parts; or
the liquid guide part comprises one or more pieces of e-liquid absorbing cotton; or
the liquid guide part comprises one or more porous ceramic parts and one or more pieces of e-liquid absorbing cotton.
10. The vaporization core for the electronic cigarette according to claim 1, wherein:

the liquid storage part comprises one or more porous ceramic parts; or
the liquid storage part comprises one or more pieces of e-liquid absorbing cotton; or
the liquid storage part comprises one or more porous ceramic parts and one or more pieces of e-liquid absorbing cotton.

11. The vaporization core for the electronic cigarette according to claim 1, wherein the liquid guide body further comprises a liquid guide part, wherein the liquid guide part is a part of the liquid guide body that is between the liquid guide side surface and a part that is obtained through translating the liquid storage side surface to the liquid guide side surface by 0.5 mm to 1.5 mm; and
in a plane perpendicular to a direction from the liquid guide side surface to the liquid storage side surface, an orthographic projection area of the liquid guide part is smaller than or equal to an orthographic projection area of the liquid storage part.
12. The vaporization core for the electronic cigarette according to claim 11, wherein the liquid storage part is configured as a cuboid shape; and
the liquid guide part is configured as a cuboid shape, a frustum of trapezoid prim shape, or a frustum of triangular prim shape.
13. The vaporization core for the electronic cigarette according to claim 1, wherein:

an area of the liquid absorbing region is smaller than or equal to an area of the vaporization region; or
the liquid guide side surface is configured as a flat surface, a polyline curved surface, an arc-shaped curved surface, or a spherical surface, and the liquid storage side surface is configured as a flat surface, a polyline curved surface, an arc-shaped curved surface, or a spherical surface; or
the vaporization core for the electronic cigarette further comprises a vaporization core sealing member, wherein the vaporization core sealing member is sleeved on the liquid guide body, the vaporization core sealing member has a liquid flowing opening, and the at least part of the liquid guide side surface is exposed from the liquid flowing opening to form the liquid absorbing region.
14. A cartridge for an electronic cigarette, comprising:

a housing, wherein the housing has a liquid storage cavity, an airway, and a vaporization cavity in communication with the airway, and the housing has an air inlet in communication with the

vaporization cavity and an air outlet in communication with the airway; and
the vaporization core for the electronic cigarette according to any one of claims 1 to 13, wherein the vaporization core is arranged in the housing, 5
the liquid absorbing region of the liquid guide side surface is in communication with the liquid storage cavity, and the vaporization region of the liquid storage side surface is in communication with the vaporization cavity. 10

15. An electronic cigarette, comprising:

the cartridge according to claim 14; and
a cigarette rod, wherein the cigarette rod is provided with an electrical component, the electrical component is electrically connected to the heating body, and the electrical component is configured to supply power to the heating body. 15
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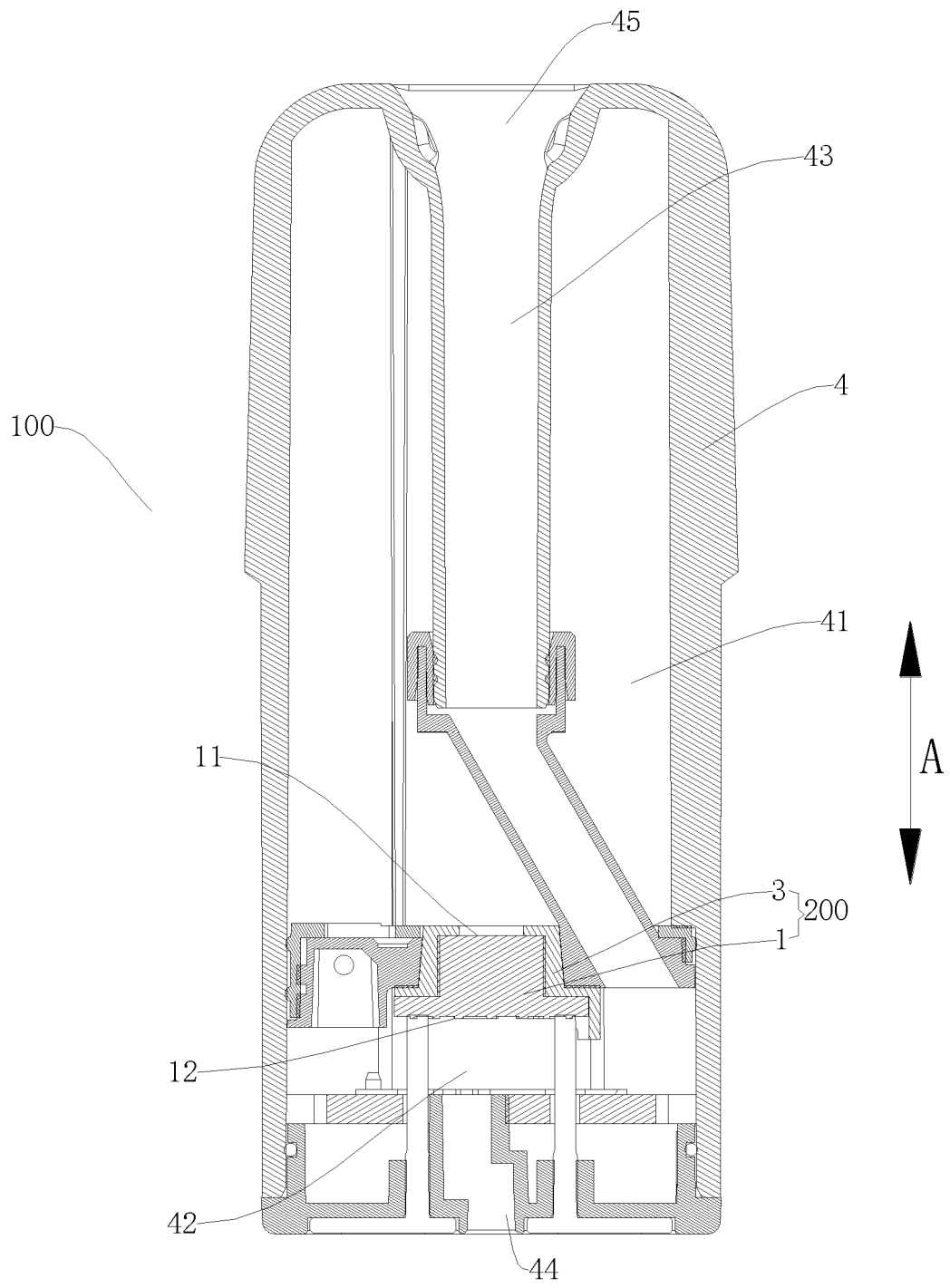
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B

FIG. 1

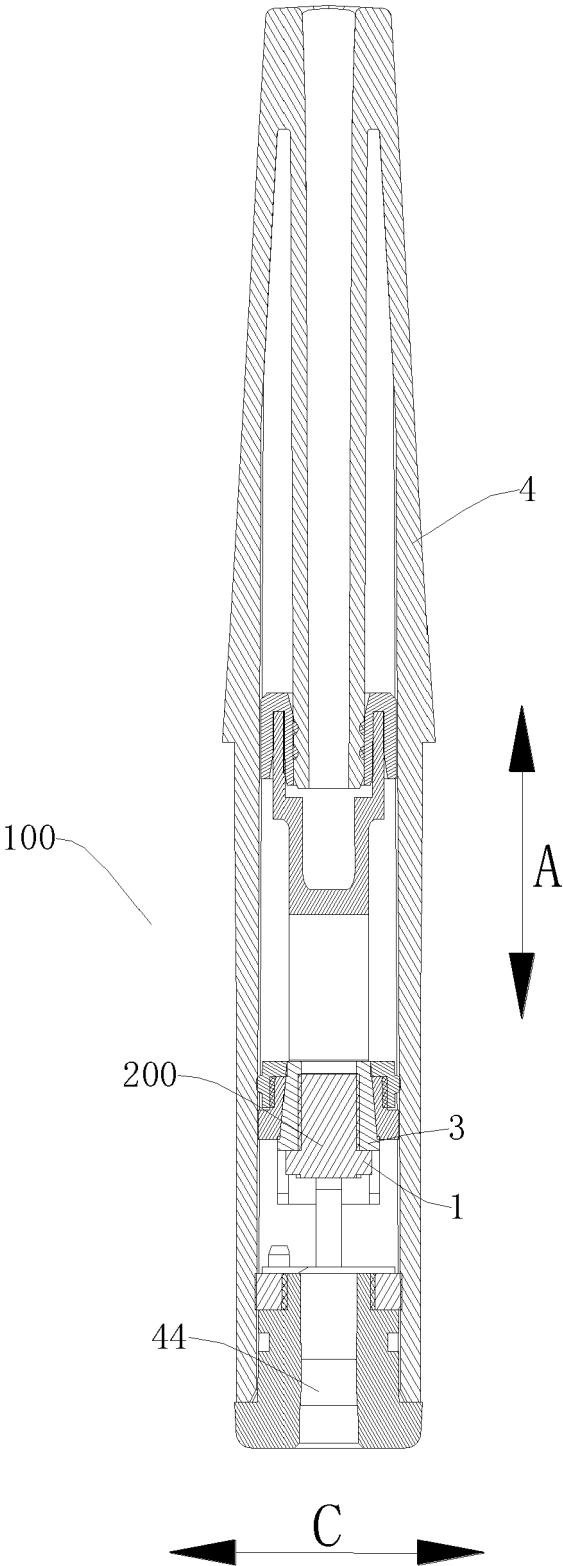


FIG. 2

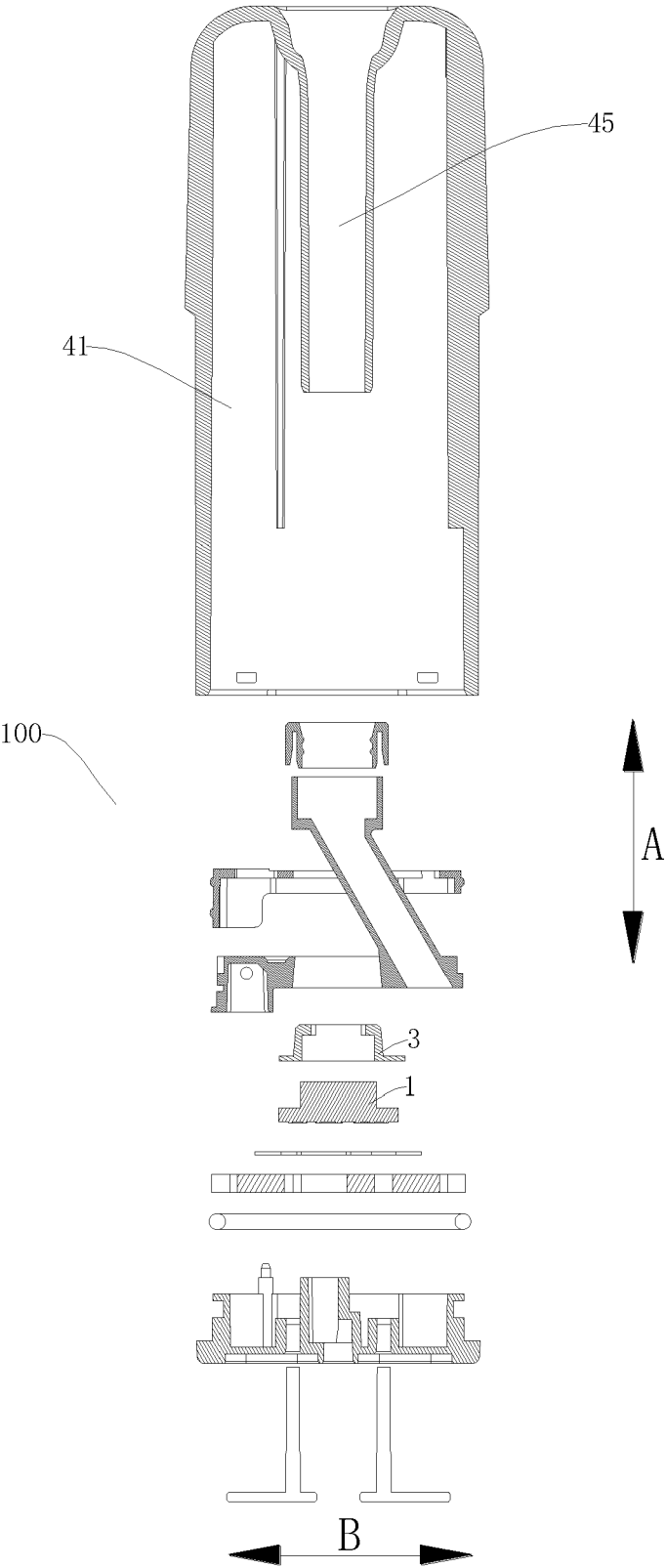


FIG. 3

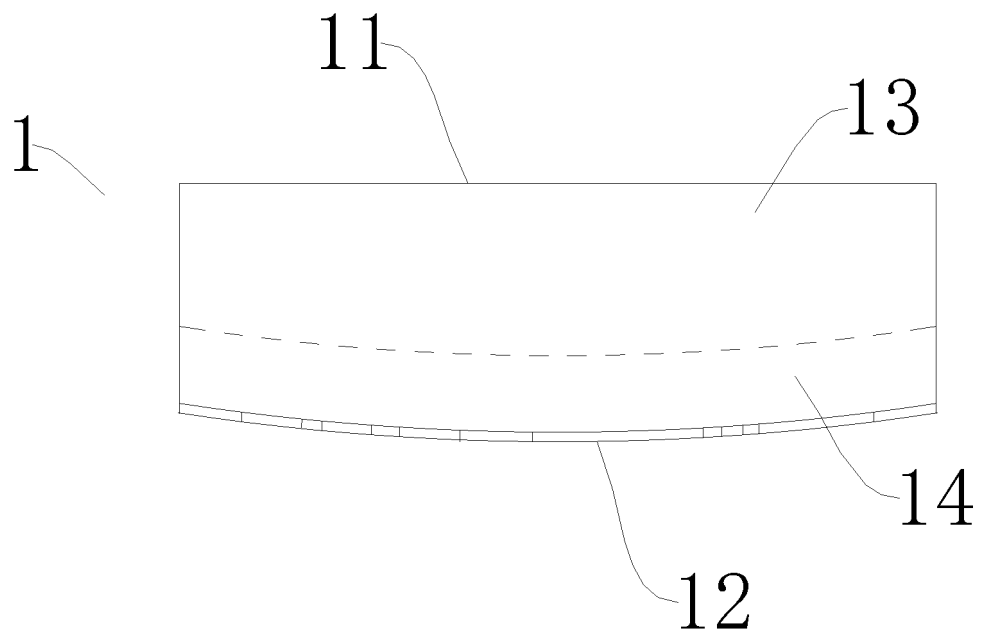


FIG. 4

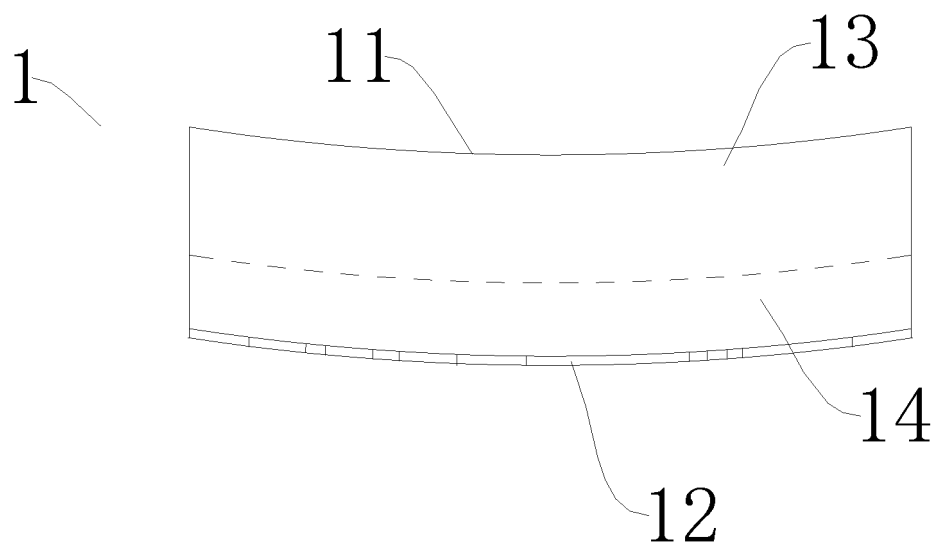


FIG. 5

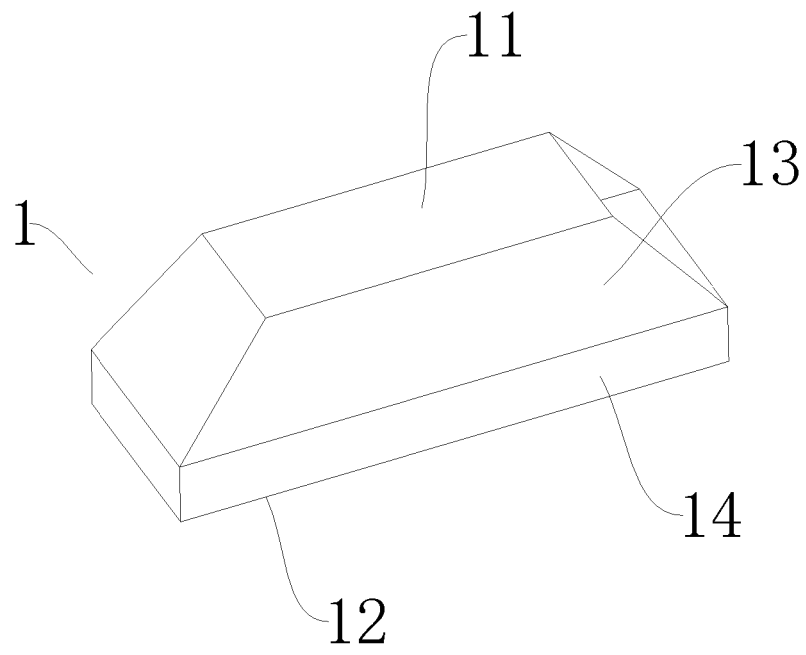


FIG. 6

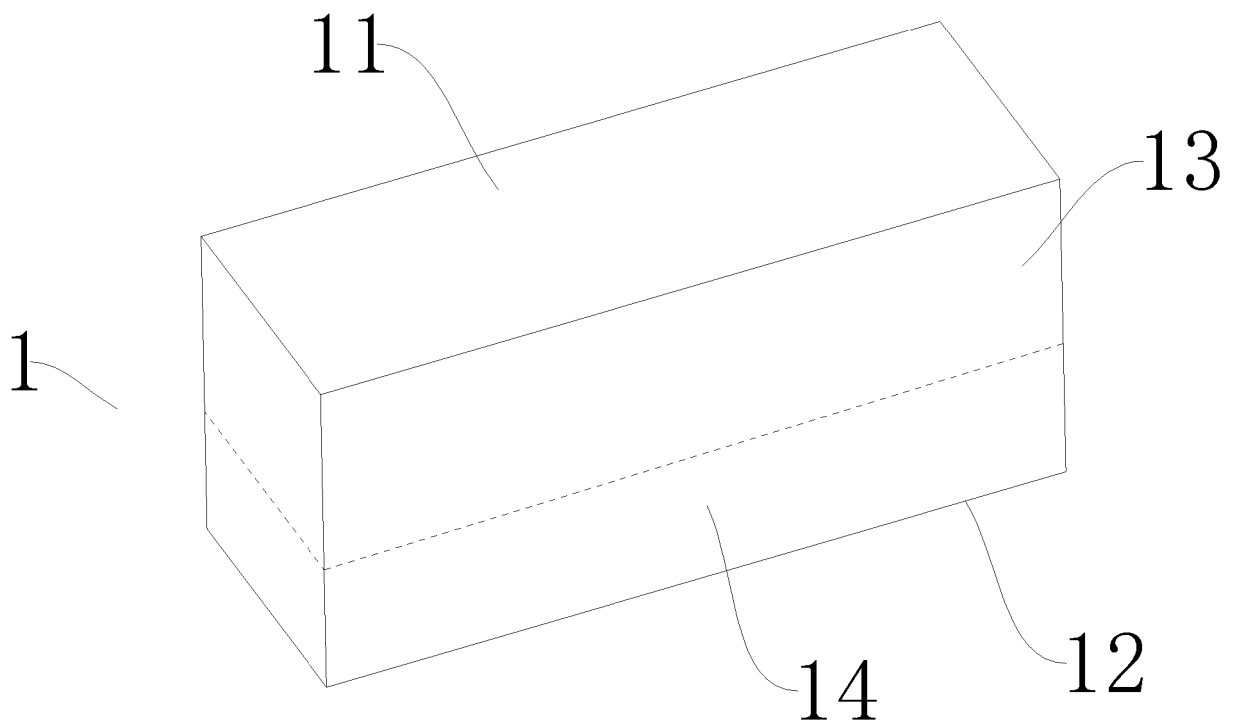


FIG. 7

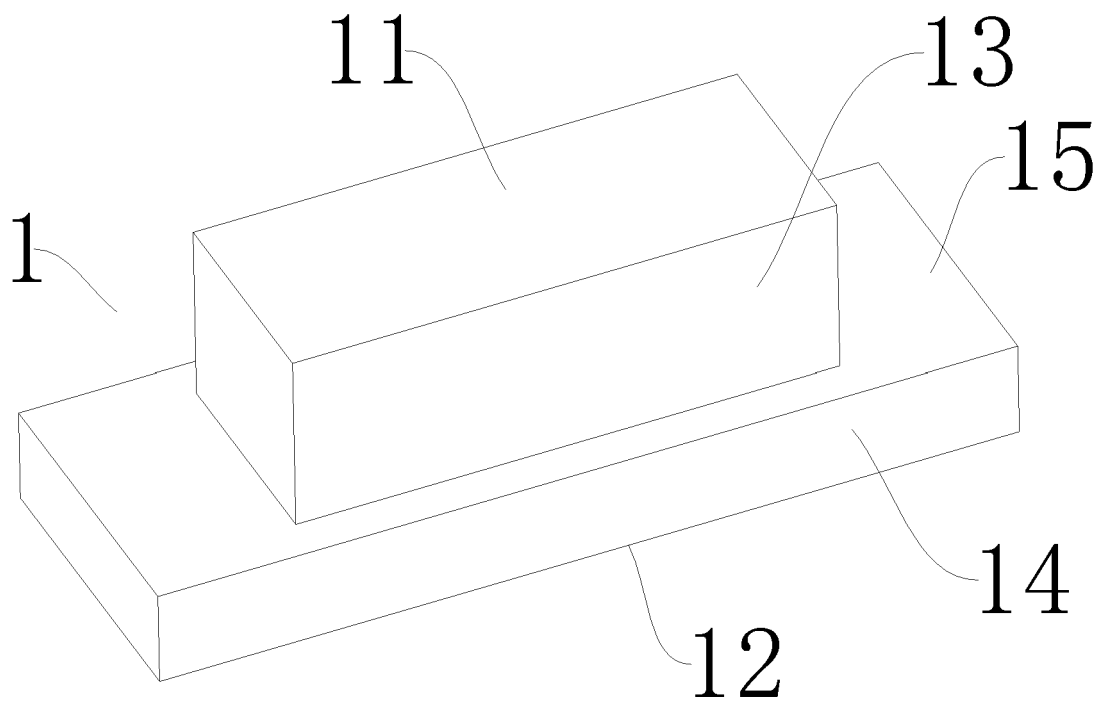


FIG. 8

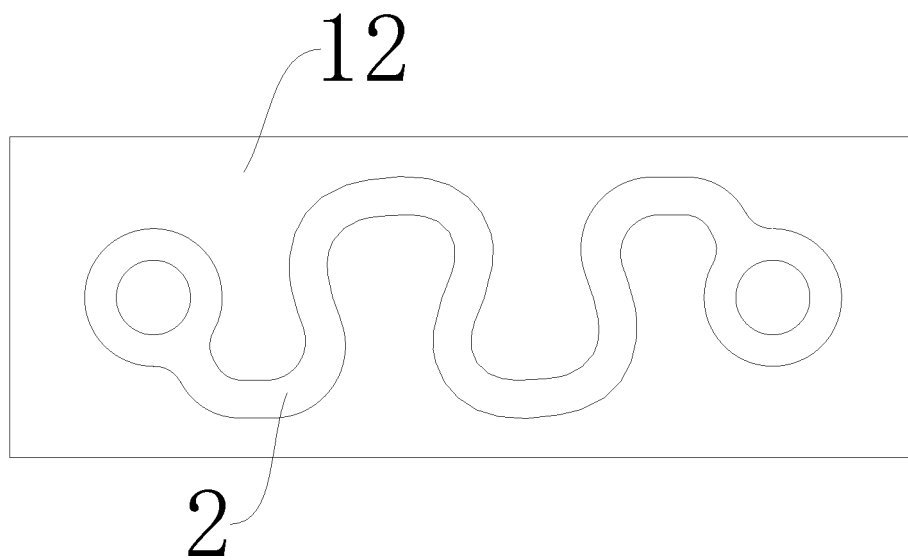


FIG. 9

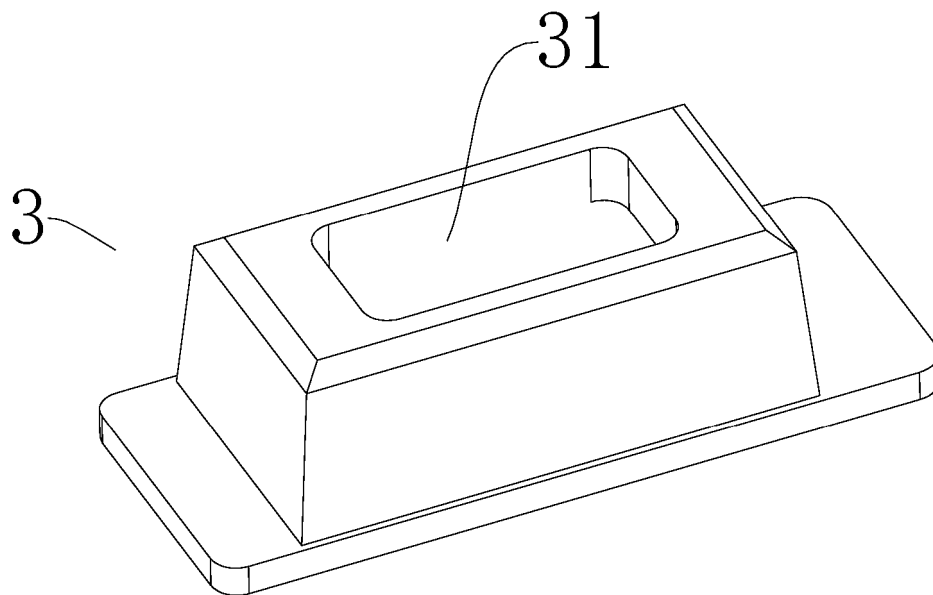


FIG. 10

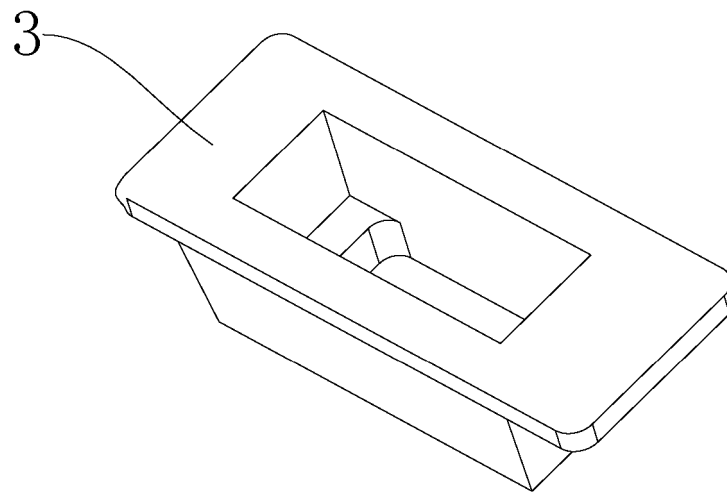


FIG. 11

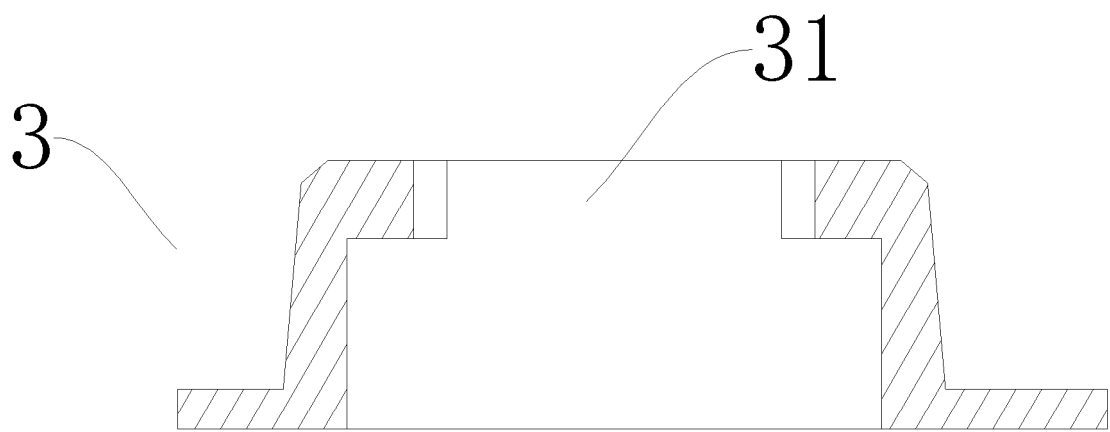


FIG. 12

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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