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STORAGE ASSEMBLY AND AEROSOL-GENERATING DEVICE

Abstract

A storage assembly for storing an aerosol-generating material includes: a storage member provided with a storage cavity for storing the aerosol-generating material and an exhaust channel for discharging an aerosol, the storage member including a light-transmitting material so as to allow observation of the aerosol-generating material in the storage cavity from outside of the storage member, a column being arranged in the storage cavity, the exhaust channel being at least partially located in the column; and a blocking member arranged in the storage cavity. The column passes through the blocking member.

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Background/Summary

CROSS-REFERENCE TO PRIOR APPLICATION

[0001] Priority is claimed to Chinese Patent Application No. 202420298438.1, filed on Feb. 18, 2024, the entire disclosure of which is hereby incorporated by reference herein.

FIELD

[0002] Embodiments of the present application relate to the field of atomization technologies, and specifically, to a storage assembly and an aerosol-generating device.

BACKGROUND

[0003] An aerosol-generating device is configured to generate an aerosol, for a user to inhale.

[0004] The aerosol-generating device is provided with a storage cavity for storing an aerosol-generating material.

[0005] As the user uses the aerosol-generating device, the aerosol-generating material in the storage cavity is continuously consumed. The user needs to determine a remaining stock of the aerosol-generating material in the storage cavity, to replenish the aerosol-generating material in time. Therefore, the light transmittance of the inner wall of the storage cavity is specific, so that the user can observe the stock of the aerosol-generating material.

[0006] A part of the aerosol formed by the aerosol-generating device remains in an exhaust channel of the aerosol-generating device and is condensed to form a condensate. The user observes the condensate in a process of observing the stock of the aerosol-generating material, affecting the user's sense of view.

SUMMARY

[0007] In an embodiment, the present invention provides a storage assembly for storing an aerosol-generating material, the storage assembly comprising: a storage member provided with a storage cavity configured to store the aerosol-generating material and an exhaust channel configured to discharge an aerosol, the storage member comprising a light-transmitting material so as to allow observation of the aerosol-generating material in the storage cavity from outside of the storage member, a column being arranged in the storage cavity, the exhaust channel being at least partially located in the column; and a blocking member arranged in the storage cavity, wherein the column passes through the blocking member.

Description

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] Subject matter of the present disclosure will be described in even greater detail below based on the exemplary figures. All features described and/or illustrated herein can be used alone or combined in different combinations. The features and advantages of various embodiments will become apparent by reading the following detailed description with reference to the attached drawings, which illustrate the following:

[0009] FIG. **1** is a schematic diagram of an aerosol-generating device in a first embodiment of the present application;

[0010] FIG. **2** is a schematic cutaway view of a position A-A in FIG. **1**;

[0011] FIG. **3** is a schematic cutaway view of a position B-B in FIG. **1**;

[0012] FIG. **4** is a schematic diagram of an aerosol-generating device in a second embodiment of the present application, where a cutting position is the same as the position in FIG. **2**;

[0013] FIG. **5** is a schematic diagram of a blocking member in an embodiment of the present application;

[0014] FIG. **6** is a schematic diagram of an aerosol-generating device in a third embodiment of the

present application;
[0015] FIG. **7** is a schematic cutaway view of a position C-C in FIG. **6**;
[0016] FIG. **8** is a schematic diagram of an aerosol-generating device in a fourth embodiment of the present application; and
[0017] FIG. **9** is a schematic cutaway view of a position D-D in FIG. **8**.
DETAILED DESCRIPTION
[0018] In an embodiment, the present invention provides a storage assembly and an aerosol-generating device that can reduce a probability that a condensate is observed.
[0019] In an embodiment, the present invention provides a storage assembly, configured to store an aerosol-generating material. The storage assembly includes: [0020] a storage member, provided with a storage cavity for storing an aerosol-generating material and an exhaust channel for discharging an aerosol, where the storage member is made of a light-transmitting material to observe the aerosol-generating material in the storage cavity from the outside of the storage member, a column is arranged in the storage cavity, and the exhaust channel is at least partially located in the column; and [0021] a blocking member, arranged in the storage cavity, where the column passes through the blocking member.
[0022] In some embodiments, the blocking member is provided with an accommodating cavity and a communicating hole, the accommodating cavity is in communication with the storage cavity through the communicating hole, the communicating hole is for the aerosol-generating material to flow out of the accommodating cavity, and the accommodating cavity is located above the communicating hole in a height direction of the column.
[0023] In some embodiments, the two ends of the blocking member in an extending direction of the column abut against the inner wall of the storage cavity.
[0024] In some embodiments, the outer side surface of the column in an extending direction of the column is tapered, the blocking member is provided with a through mounting hole, the inner wall of the mounting hole is tapered in the extending direction of the column, and the inner wall of the mounting hole is attached to the outer side surface of the column in the extending direction of the column.
[0025] In some embodiments, the storage member further includes a supply channel, the supply channel is in communication with the storage cavity, the supply channel is for the aerosol-generating material to flow out of the storage cavity, and the blocking member is spaced apart from the inlet of the supply channel.
[0026] In some embodiments, the column extends in a first direction, and on a projection plane perpendicular to the first direction, the projection of the inlet of the supply channel is located within the projection range of the blocking member.
[0027] In some embodiments, the column extends in a first direction, the storage member further includes a supply channel, the supply channel is in communication with the storage cavity, the supply channel is for the aerosol-generating material to flow out of the storage cavity, and on a projection plane perpendicular to the first direction, the projection of the inlet of the supply channel is at least partially located on the outer side of the projection of the blocking member away from the projection of the column.
[0028] In some embodiments, the column extends in a first direction, the storage member further includes a supply channel, the supply channel is in communication with the storage cavity, the supply channel is for the aerosol-generating material to flow out of the storage cavity, the blocking member is provided with a through airflow guiding channel, the first end of the airflow guiding channel is in communication with the storage cavity, and on a projection plane perpendicular to the first direction, the projection of the inlet of the supply channel is at least partially located within the projection range of the opening of the second end of the airflow guiding channel.
[0029] In some embodiments, the column and the blocking member slidably fit in an extending direction of the column, and the material density of the blocking member is less than the density of

the aerosol-generating material.
[0030] An embodiment of the present application further provides an aerosol-generating device. The aerosol-generating device includes an atomization core, a power supply assembly, and the storage assembly in any one of the foregoing embodiments, where the power supply assembly is electrically connected to the atomization core, the atomization core is configured to atomize the aerosol-generating material to form the aerosol, and the atomization core is in communication with the exhaust channel.
[0031] In the storage assembly in the embodiments of the present application, the storage member made of the light-transmitting material is arranged, so that a user can observe a stock of the aerosol-generating material in the storage cavity, and the user can more accurately determine replenishment timing of the aerosol-generating material. The blocking member is arranged, so that a probability that the user directly observes a condensate on the inner wall of the exhaust channel is reduced, and the user's sense of view during use can be improved.
Descriptions of Reference Numerals
[0032] **10**—storage assembly; **10***a*—storage cavity; **11**—atomization core; **12**—storage member; **121**—shell; **122**—mounting hole kit; **12***a*—supply channel; **13**—blocking member; **13***a*—accommodating cavity; **13***b*—communicating hole; **13***c*—mounting hole; **13***d*—airflow guiding channel; **131**—airflow guiding body; **1311**—airflow guiding protrusion; **1311***a*—airflow guiding surface; **132**—tray; **14**—column; **14***a*—exhaust channel; and **20**—power supply assembly.
[0033] It should be noted that, technical features in the embodiments of the present application may be mutually combined in case of no conflict. The detailed descriptions in specific implementations should be understood as explanatory descriptions of ideas of the embodiments of the present application, and should not be considered as improper limitations to the embodiments of the present application.
[0034] In the description of the embodiments of the present application, the orientation or position relationship of “first direction” is based on orientation or position relationships shown in FIG. **2**, FIG. **7** and FIG. **9**, the orientation or position relationship of “second direction” is based on orientation or position relationships shown in FIG. **3** and FIG. **5**, and the orientation or position relationship of “third direction” is based on orientation or position relationships shown in FIG. **2** and FIG. **5**. It should be understood that, such orientation terms are used only for ease and brevity of illustration and description of the embodiments of the present application, rather than indicating or implying that the mentioned device or element needs to have a particular orientation or needs to be constructed and operated in a particular orientation. Therefore, such terms should not be construed as limitations to the embodiments of the present application.
[0035] An embodiment of the present application provides a storage assembly **10**, configured to store an aerosol-generating material in an aerosol-generating device. Referring to FIG. **1** to FIG. **4** and FIG. **6** to FIG. **9**, the storage assembly **10** includes a storage member **12** and a blocking member **13**.
[0036] The storage member **12** is provided with a storage cavity **10***a* for storing the aerosol-generating material and an exhaust channel **14***a* for discharging an aerosol.
[0037] The storage member **12** is made of a light-transmitting material to observe the aerosol-generating material in the storage cavity **10***a* from the outside of the storage member **12**.
[0038] The light-transmitting material is the material with the light transmittance of not less than 50%.
[0039] In this way, during use of the aerosol-generating device, a user can observe a stock of the aerosol-generating material in the storage cavity **10***a* through the storage member **12**, so that the user determines replenishment timing of the aerosol-generating material.
[0040] The exhaust channel **14***a* passes through the storage member **12**, so that the aerosol can pass through the exhaust channel **14***a* to be inhaled by the user.
[0041] A column **14** is arranged in the storage cavity **10***a*, and the exhaust channel **14***a* is at least

partially located in the column **14**. It may be understood that, after the user stops inhaling the aerosol, a part of the aerosol cannot be discharged from the exhaust channel in time, and then is condensed on the inner wall of the exhaust channel **14***a* to form a condensate. Because the storage member **12** is made of the light-transmitting material, the user can observe the condensate on the inner wall of the exhaust channel **14***a*.

[0042] The blocking member **13** is arranged in the storage cavity **10***a*, where the column **14** passes through the blocking member **13**. In other words, the blocking member **13** can block the line of sight of the user, to reduce a probability that the user directly observes the condensate on the inner wall of the exhaust channel **14***a*.

[0043] In the storage assembly **10** in this embodiment of the present application, the storage member **12** made of the light-transmitting material is arranged, so that the user can observe the stock of the aerosol-generating material in the storage cavity **10***a*, and the user can more accurately determine timing at which the aerosol-generating material is exhausted. The blocking member **13** is arranged, so that the probability that the user directly observes the condensate on the inner wall of the exhaust channel **14***a* is reduced, and the user's sense of view during the use can be improved.

[0044] It may be understood that, after the user observes, through the storage member, that the aerosol-generating material in the storage assembly **10** is exhausted, the user may select to replace the storage assembly **10** to replenish the aerosol-generating material in the aerosol-generating device; or the user may select to directly discard the aerosol-generating device, in other words, the aerosol-generating device is disposable.

[0045] A specific manner of replacing the storage assembly **10** is not limited.

[0046] For example, only the storage assembly **10** may be replaced, in other words, components such as an atomization core **11** and a power supply assembly **20** in the aerosol-generating device are fixedly connected to be reused, so that costs of replenishing the aerosol-generating material are reduced. For another example, the storage assembly **10** and the atomization core **11** jointly form an atomizer, and the atomizer is detachably configured, so that the aerosol-generating material is replenished by replacing the atomizer through overall disassembly and assembly. In this way, a new atomization core **11** is replaced, thereby improving efficiency of atomizing the aerosol after the replacement.

[0047] In an embodiment in which the atomizer can be replaced through overall disassembly and assembly, referring to FIG. **2**, the storage member includes a shell **121** and a mounting base kit **122**, where the shell **121** covers a side of the mounting base kit **122** to jointly enclose the storage cavity. The atomization core **11** includes an atomization region, where the atomization region can atomize the aerosol-generating material to form the aerosol through heating or the like. The atomization core **11** is arranged in an atomization cavity in the mounting base kit **122**, and a plurality of channels are formed in the mounting base kit, where the channels are partially for conveying the aerosol-generating material to the atomization core **11**, and are partially for discharging the aerosol out of the exhaust channel **14***a*.

[0048] A specific manner of forming the atomization region is not limited. For example, the atomization core **11** includes a substrate and a heating element, where the substrate is configured to come into contact with the aerosol-generating material and absorb the aerosol-generating material, and the heating element forms the atomization region to generate heat to atomize the aerosol-generating material in the substrate to form the aerosol.

[0049] It should be noted that, a specific material of the atomization core **11**, a related structure and principle for forming the aerosol through atomization, a specific structure of a forming channel of the mounting base kit **122**, and the like are disclosed in the related art, and are not described herein again.

[0050] It may be understood that, the light transmittance of the material of the blocking member **13** is less than that of the material of the storage member **12**, or the material of the blocking member **13** is opaque, to block the line of sight of the user, thereby reducing the probability that the user

directly observes the condensate on the inner wall of the exhaust channel **14***a*.

[0051] It may be understood that, the color of the outer surface of the blocking member **13** is different from the color of the aerosol-generating material, so that the user can determine the stock of the aerosol-generating material in the storage cavity **10***a* based on the blocking member **13** as a background reference.

[0052] It may be understood that, the blocking member **13** occupies a part of a volume in the storage cavity **10***a*.

[0053] In some embodiments, referring to FIG. **4**, the blocking member **13** is provided with an accommodating cavity **13***a* and a communicating hole **13***b*. The blocking member **13** is provided with the communicating hole **13***b*, the accommodating cavity **13***a* is in communication with the storage cavity **10***a* through the communicating hole **13***b*, and the communicating hole **13***b* is for the aerosol-generating material to flow out of the accommodating cavity **13***a*.

[0054] To be specific, a part of the aerosol-generating material can be stored in the accommodating cavity **13***a*, and as the aerosol-generating material in the storage cavity **10***a* is consumed, the aerosol in the accommodating cavity **13***a* can flow into the storage cavity **10***a* through the communicating hole **13***b* for use.

[0055] In this way, the accommodating cavity **13***a* is arranged, so that the amount of the aerosol-generating material stored in the storage assembly **10** can be increased, thereby prolonging the service life of the storage assembly **10**.

[0056] In some embodiments, the accommodating cavity **13***a* is located above the communicating hole **13***b* in a height direction of the column **14**. The height direction is the direction of gravity during use of the aerosol-generating device.

[0057] In this way, during the use of the aerosol-generating device, the aerosol-generating material in the accommodating cavity **13***a* can directly flow into the communicating hole **13***b* under the action of gravity, so that a probability that the aerosol-generating material accumulated in the accommodating cavity **13***a* cannot be replenished into the storage cavity **10***a* is reduced.

[0058] The blocking member **13** is at least partially made of a light-transmitting material, so that the user can observe the stock of the aerosol-generating material in the accommodating cavity **13***a*.

[0059] In some embodiments, the side of the blocking member **13** close to the column **14** is made of a non-light-transmitting material, and the side of the blocking member **13** away from the column **14** is made of a light-transmitting material, so that the probability that the user observes the condensate in the exhaust channel **14***a* is reduced while the user can observe the aerosol-generating material in the accommodating cavity **13***a*.

[0060] In some embodiments, referring to FIG. **2** to FIG. **4**, FIG. **7**, and FIG. **9**, the column **14** extends in a straight-line direction, so that the exhaust channel **14***a* can extend in the straight-line direction, thereby improving efficiency of discharging the aerosol; and the thickness of the wall of the column **14** can be reduced, thereby improving space utilization in the storage assembly **10**.

[0061] In some embodiments, referring to FIG. **2** to FIG. **4**, and FIG. **7**, the two ends of the blocking member **13** in an extending direction of the column **14** abut against the inner wall of the storage cavity **10***a*.

[0062] In this way, the inner wall of the storage cavity **10***a* limits a position of the blocking member **13** in the extending direction of the column **14**, so that the blocking member **13** remains fixed in the extending direction of the column **14**, thereby reducing an adverse impact of an abnormal sound generated by movement of the blocking member **13** on user experience, and ensuring that the blocking member **13** always blocks the column **14**.

[0063] It may be understood that, the two ends of the blocking member **13** in the extending direction of the column **14** may abut against only the storage member **12**; or may abut against only the atomization core **11**. Alternatively, one end of the blocking member **13** in the extending direction of the column **14** may abut against the storage member **12**, and the other end of the blocking member **13** in the extending direction of the column **14** may abut against the atomization

core **11**.

[0064] In some embodiments, in FIG. **2** to FIG. **4**, the outer side surface of the column **14** in an extending direction of the column **14** is tapered, the blocking member **13** is provided with a through mounting hole **13***c*, the inner wall of the mounting hole **13***c* is tapered in the extending direction of the column **14**, and the inner wall of the mounting hole **13***c* can be attached to the outer side surface of the column **14** in the extending direction of the column **14**.

[0065] To be specific, the cross-sectional area of the column **14** perpendicular to the extending direction of the column **14** gradually increases in the extending direction of the column **14**, the cross-sectional area of the inner wall of the mounting hole **13***c* perpendicular to the extending direction of the column **14** gradually increases in the extending direction of the column **14**, and the cross-sectional areas increase in the same direction. The outer side surface of the column **14** in the extending direction of the column **14** can abut against the inner wall of the mounting hole **13***c* in the extending direction of the column **14**, thereby limiting a tendency of the blocking member **13** moving in a direction in which the cross-sectional area of the column **14** increases in the extending direction of the column **14**.

[0066] In this way, the blocking member **13** can remain fixed in the extending direction of the column **14**, thereby reducing an adverse impact of an abnormal sound generated by movement of the blocking member **13** on user experience, and ensuring that the blocking member **13** always blocks the column **14**.

[0067] In some embodiments, the end of the blocking member **13** away from a direction in which the cross-sectional area of the blocking member **13** perpendicular to an extending direction of the column **14** increases in the extending direction of the column **14** abuts against the inner wall of the storage cavity **10***a*, so that the position of the blocking member **13** can remain fixed.

[0068] Specific shapes of the tapered shape of the outer side surface of the column **14** in the extending direction of the column **14** and the tapered shape of the inner wall of the mounting hole **13***c* in the extending direction of the column **14** are not limited, for example, a cone or a pyramid.

[0069] It may be understood that, the tapered shape of the outer side surface of the column **14** in the extending direction of the column **14** and the tapered shape of the inner wall of the mounting hole **13***c* in the extending direction of the column **14** are the same.

[0070] In some embodiments, referring to FIG. **2**, FIG. **4**, FIG. **7**, and FIG. **9**, the storage member further includes a supply channel **12***a*, the supply channel **12***a* is in communication with the storage cavity **10***a*, and the supply channel **12***a* is for the aerosol-generating material to flow out of the storage cavity **10***a*. In this way, the aerosol-generating material in the storage cavity **10***a* can be discharged from the storage assembly **10** through the supply channel **12***a*.

[0071] In some embodiments in which the communicating hole **13***b* is provided, referring to FIG. **4**, the opening of the end of the communicating hole **13***b* away from the accommodating cavity **13***a* is located on the side of the blocking member **13** close to the inlet of the supply channel **12***a*, so that the aerosol-generating material in the accommodating cavity **13***a* can enter the supply channel **12***a* in a more timely manner.

[0072] In some embodiments in which the supply channel **12***a* is provided, referring to FIG. **2** and FIG. **4**, the blocking member **13** is spaced apart from the inlet of the supply channel **12***a*.

[0073] In this way, a probability that the inlet of the supply channel **12***a* is blocked because the blocking member **13** comes into contact with the atomization core **11** can be avoided, thereby maintaining free flow between the storage cavity **10***a* and the supply channel **12***a*.

[0074] In some embodiments in which the supply channel **12***a* is provided, referring to FIG. **2** and FIG. **4**, the column **14** extends in a first direction, and on a projection plane perpendicular to the first direction, the projection of the inlet of the supply channel **12***a* is located within the projection range of the blocking member **13**.

[0075] In this way, the blocking member **13** can have a blocking effect on the inlet of the supply channel **12***a*, thereby improving the user's sense of view.

[0076] A specific manner in which the blocking member **13** is spaced apart from the inlet of the supply channel **12***a* is not limited.
[0077] For example, a plurality of support protrusions are arranged on the end surface of the end of the atomization core **11** close to the storage member **12** in the first direction, and the support protrusions extend in the first direction and abut against the blocking member **13**. In other words, the blocking member **13** is spaced apart from the inlet of the supply channel **12***a* in the first direction.
[0078] In some embodiments in which the supply channel **12***a* is provided, on a projection plane perpendicular to the first direction, the projection of the inlet of the supply channel **12***a* is at least partially located on the outer side of the projection of the blocking member **13** away from the projection of the column **14**. In other words, the blocking member **13** is spaced apart from the inlet of the supply channel **12***a* in a direction perpendicular to the first direction.
[0079] In this way, the aerosol-generating material in the storage cavity **10***a* can directly enter the supply channel **12***a* in the first direction, thereby reducing an adverse impact on efficiency of the aerosol-generating material entering the supply channel **12***a* due to blocking by the blocking member **13**.
[0080] It may be understood that, the projection of the inlet of the supply channel **12***a* may be partially located on the outer side of the projection of the blocking member **13** away from the projection of the column **14**; or the projection of the inlet of the supply channel **12***a* may be completely located on the outer side of the projection of the blocking member **13** away from the projection of the column **14**.
[0081] In some embodiments in which the supply channel **12***a* is provided, referring to FIG. **2** and FIG. **4**, the blocking member **13** is provided with a through airflow guiding channel **13***d*, the first end of the airflow guiding channel **13***d* is in communication with the storage cavity **10***a*, and on a projection plane perpendicular to the first direction, the projection of the inlet of the supply channel **12***a* is at least partially located within the projection range of the opening of the second end of the airflow guiding channel **13***d*.
[0082] In this way, the aerosol-generating material in the storage cavity **10***a* can pass through the airflow guiding channel **13***d* and enter the supply channel **12***a*, thereby reducing an adverse impact on efficiency of the aerosol-generating material entering the supply channel **12***a* due to blocking by the blocking member **13**.
[0083] It may be understood that, in the embodiments in which the airflow guiding channel **13***d* is provided, the blocking member **13** may be spaced apart from the inlet of the supply channel **12***a*; or the blocking member **13** may be attached to the wall surface of the storage cavity **10***a* provided with the inlet of the supply channel **12***a*.
[0084] In some embodiments, the first direction is a length direction of the storage assembly **10** and the height direction of the column **14**.
[0085] The length direction of the storage assembly **10** is a straight-line direction in which a maximum size value in three-dimensional sizes of the storage assembly **10** is located.
[0086] In some embodiments, the airflow guiding channel **13***d* is provided on the two sides of the blocking member **13** in a third direction, and the inlet of the supply channel **12***a* is provided on the two sides of the column **14** in the third direction, thereby improving the efficiency of the aerosol-generating material entering the supply channel **12***a*.
[0087] It may be understood that, during the use of the aerosol-generating device by the user, a placement direction of the storage assembly **10** has an important impact on case of the aerosol in the storage cavity **10***a* entering the supply channel **12***a*.
[0088] In some embodiments, referring to FIG. **3** and FIG. **5**, the blocking member **13** includes a plurality of airflow guiding bodies **131**. The plurality of airflow guiding bodies **131** are arranged on the two sides of the column **14** in a second direction. Airflow guiding bodies **131** on each side are arranged in steps and the ends of the airflow guiding bodies **131** close to the inlet of the supply

channel **12***a* are flush. In a direction away from the column **14**, the sizes of the airflow guiding bodies **131** on each side in the first direction and the sizes of the airflow guiding bodies **131** on each side in a third direction decrease step by step. An airflow guiding channel **13***d* is provided on at least one side of the blocking member **13** in the third direction. The first direction, the second direction, and the third direction are orthogonal.

[0089] When the aerosol-generating device is at a placement position in which the first direction is perpendicular to the direction of gravity, in a state in which the second direction is approximately the same as the direction of gravity, because the airflow guiding bodies **131** located on one side of the column **14** in the second direction are arranged in steps in the second direction and the sizes of the airflow guiding bodies **131** in the third direction decrease step by step, the aerosol-generating material is squeezed to flow to the two sides of the blocking member **13** in the third direction. In this way, a liquid level of the aerosol-generating material can be raised, so that the aerosol-generating material more easily enters the airflow guiding channel **13***d* located in the region. In a state in which the third direction is approximately the same as the direction of gravity, under the action of gravity, the aerosol-generating material naturally deposits on the two sides of the blocking member **13** in the third direction. In this way, the liquid level of the aerosol-generating material can be raised, so that the aerosol-generating material more easily enters the airflow guiding channel **13***d* located in the region.

[0090] When the aerosol-generating device is at a placement position in which the first direction is in the direction of gravity and the inlet of the supply channel **12***a* is located below the storage member **12**, the airflow guiding bodies **131** located on one side of the column **14** in the second direction are arranged in steps and the sizes of the airflow guiding bodies **131** in the first direction decrease step by step, in other words, the blocking member **13** occupies more space in the storage cavity **10***a* in the second direction as the airflow guiding bodies **131** are closer to the inlet of the supply channel **12***a* in the first direction. Therefore, as the aerosol-generating material in the storage cavity **10***a* decreases, the liquid level of the aerosol-generating material can be raised under squeezing of the airflow guiding bodies **131** on the aerosol-generating material, so that the aerosol-generating material more easily enters the airflow guiding channel **13***d* located on one side of the column **14** in the third direction.

[0091] In this way, through arrangement of the airflow guiding bodies **131**, more aerosol-generating materials can enter the supply channel **12***a*, thereby improving utilization of the aerosol-generating material.

[0092] In some embodiments, referring to FIG. **5**, a plurality of airflow guiding protrusions **1311** are provided on the end of the airflow guiding body **131** away from the inlet of the supply channel **12***a* in the first direction. The two side surfaces of the airflow guiding protrusion **1311** in the third direction are airflow guiding surfaces **1311***a*. In a direction close to the inlet of the supply channel **12***a*, two airflow guiding surfaces **1311***a* of a same airflow guiding protrusion **1311** are away from each other in the third direction.

[0093] In this way, the aerosol-generating material in contact with the airflow guiding surfaces **1311***a* can flow to two sides in the third direction under the guiding action of the airflow guiding surfaces **1311***a*, so that the aerosol-generating material can flow into the airflow guiding channel **13***d*, and the efficiency of the aerosol-generating material entering the supply channel **12***a* can be improved.

[0094] A specific shape of the airflow guiding surface **1311***a* is not limited, and may be a flat surface or a circular arc surface.

[0095] Referring to FIG. **5**, the end surface of the airflow guiding body **131** away from the column **14** in the second direction is a plane extending in the first direction, to improve efficiency of the aerosol-generating material flowing on the airflow guiding body **131**.

[0096] A specific quantity of airflow guiding protrusions **1311** on one airflow guiding body **131** is not limited, and may be one or more. Referring to FIG. **5**, the plurality of airflow guiding

protrusions **1311** are arranged in the third direction.

[0097] In some embodiments, referring to FIG. **5**, two airflow guiding surfaces **1311***a* of a same airflow guiding protrusion **1311** intersect at the end of the airflow guiding protrusion **1311** away from the inlet of the supply channel **12***a*. In other words, the airflow guiding protrusion **1311** forms a peak shape, to reduce a probability that the aerosol-generating material remains on a surface of the airflow guiding protrusion **1311**.

[0098] In some embodiments, referring to FIG. **5**, the blocking member **13** includes a tray **132**, the airflow guiding body **131** is arranged on the side of the tray **132** facing away from the inlet of the supply channel **12***a* in the first direction, and the tray **132** and the inner wall of the storage cavity **10***a* block and fit in a direction using the first direction as a rotation axis, to suppress relative rotation between the blocking member **13** and the storage member **12**.

[0099] It may be understood that, the airflow guiding channel **13***d* passes through the tray **132**.

[0100] In some embodiments in which the column **14** extends in the first direction and abuts against the inlet of the supply channel **12***a* and the supply channel **12***a* is provided, referring to FIG. **6** and FIG. **7**, in a direction away from the inlet of the supply channel **12***a* in the first direction, the cross-section area of the blocking member **13** perpendicular to the first direction gradually increases, the blocking member **13** abuts against the inlet of the supply channel **12***a*, and the contact area between the blocking member **13** and the inlet of the supply channel **12***a* is located between the column **14** and the inlet of the supply channel **12***a*.

[0101] In this way, when the aerosol-generating device is at a placement position in which the first direction is perpendicular to the direction of gravity, the aerosol-generating material can partially flow facing the inlet of the supply channel **12***a* under guidance of the outer side surface of the blocking member **13**, so that the aerosol-generating material can enter the supply channel **12***a* in time.

[0102] A specific shape of the outer contour of the blocking member **13** is not limited; and may be an entire circular arc surface, or may be formed by splicing a plurality of planes, or may be formed by splicing a plurality of circular arc surfaces, or may be formed by splicing a plurality of circular arc surfaces and a plurality of planes.

[0103] In some embodiments, referring to FIG. **7**, the end of the blocking member **13** away from the inlet of the supply channel **12***a* at least partially abuts against the inner wall of the storage cavity **10***a* in a direction perpendicular to the first direction. A probability of relative rotation between the blocking member **13** and the column **14** can be suppressed through a friction force between the blocking member **13** and the inner wall of the storage cavity **10***a*. In some embodiments, referring to FIG. **7**, a positioning groove is provided on the inner wall of the side of the storage cavity **10***a* away from the inlet of the supply channel **12***a* in the first direction. The side of the positioning groove facing the inlet of the supply channel **12***a* in the first direction is open. The blocking member **13** is inserted into the positioning groove through the opening of the positioning groove, and abuts against the inner wall of the positioning groove in the first direction and the direction perpendicular to the first direction, to limit a position of the blocking member **13** in the first direction, and suppress a movement tendency of the blocking member **13** rotating relative to the inner wall of the storage cavity **10***a* and the column **14**.

[0104] In some embodiments, the column **14** and the blocking member **13** slidably fit in an extending direction of the column **14**, and the material density of the blocking member **13** is less than the density of the aerosol-generating material.

[0105] In other words, the blocking member **13** can float near the liquid level of the aerosol-generating material, and move in the extending direction of the column **14** under the action of a floating force of the aerosol-generating material.

[0106] In this way, as a content of the aerosol-generating material changes, a position of the liquid level of the aerosol-generating material changes, and the position of the blocking member **13** also changes accordingly, so that the user can determine a current stock of the aerosol-generating

material in the storage cavity **10***a* by directly observing a floating position of the blocking member **13**.

[0107] It may be understood that, after the aerosol-generating material is consumed to a certain amount, the floating force generated by the aerosol-generating material is insufficient to enable the blocking member **13** to be in a floating state.

[0108] In some embodiments, referring to FIG. **9**, the blocking member **13** includes a floating ball, the floating ball is spherical, the column **14** extends in the first direction, and the inlet of the supply channel **12***a* and the column **14** are spaced apart in a direction perpendicular to the first direction. In this way, in a state in which the aerosol-generating material in the storage cavity **10***a* is consumed to a point that the aerosol-generating material cannot provide an enough floating force to enable the blocking member **13** float, because the surface of the side of the floating ball facing the inlet of the supply channel **12***a* is circular-arc-shaped, even if the floating ball abuts against the end surface of the atomization core **11** provided with the inlet of the supply channel **12***a*, the inlet of the supply channel **12***a* is not completely blocked. In this way, the aerosol-generating material in the storage cavity **10***a* can enter the supply channel **12***a*.

[0109] In some embodiments, referring to FIG. **8** and FIG. **9**, the blocking member **13** includes a floating ball and an annular plate, the column **14** passes through the floating ball, and the annular plate is arranged around the surface of the floating ball.

[0110] The annular plate is arranged, so that the contact area between the blocking member **13** and the aerosol-generating material in the storage cavity **10***a* can increase, thereby suppressing the aerosol-generating material from surging to form bubbles during transportation of the aerosol-generating device.

[0111] An embodiment of the present application further provides an aerosol-generating device. Referring to FIG. **1** to FIG. **4** and FIG. **6** to FIG. **9**, the aerosol-generating device includes an atomization core **11** and the storage assembly **10** in any one of the foregoing embodiments, where the power supply assembly **20** is electrically connected to the atomization core **11**, the atomization core **11** is configured to atomize the aerosol-generating material to form the aerosol, and the atomization core **11** is in communication with the exhaust channel **14***a*.

[0112] The power supply assembly **20** is configured to supply power to the atomization core **11**, so that the atomization core **11** can atomize the aerosol-generating material to form the aerosol.

[0113] The aerosol-generating material in the storage assembly **10** is discharged from the storage assembly **10** and comes into contact with the atomization core **11**, the atomization core **11** atomizes the aerosol-generating material to form the aerosol, and the aerosol is then discharged from the aerosol-generating device through the exhaust channel **14***a* in communication with the atomization core **11**, for a user to inhale.

[0114] In some embodiments, referring to FIG. **2** to FIG. **4**, one side of the power supply assembly **20** is provided with a mounting cavity, one side of the mounting cavity is open, the atomization core **11** is located in the mounting cavity, and the storage member **12** is partially located in the mounting cavity and partially located outside of the mounting cavity, so that the user can observe a remaining stock of the aerosol-generating material in the storage cavity **10***a* of the aerosol-generating device from the outside of the aerosol-generating device.

[0115] In some embodiments, the inner wall of the mounting cavity is at least partially made of a light-transmitting material, so that a field of view in which the user observes the stock of the aerosol-generating material in the storage cavity **10***a* can be expanded, thereby improving user experience. The embodiments/implementations of the present application may be combined with each other without contradictions.

[0116] While the invention has been illustrated and described in detail in the drawings and foregoing description, such illustration and description are to be considered illustrative or exemplary and not restrictive. It will be understood that changes and modifications may be made by those of ordinary skill within the scope of the following claims. In particular, the present

invention covers further embodiments with any combination of features from different embodiments described above and below. Additionally, statements made herein characterizing the invention refer to an embodiment of the invention and not necessarily all embodiments.
[0117] The terms used in the claims should be construed to have the broadest reasonable interpretation consistent with the foregoing description. For example, the use of the article “a” or “the” in introducing an clement should not be interpreted as being exclusive of a plurality of elements. Likewise, the recitation of “or” should be interpreted as being inclusive, such that the recitation of “A or B” is not exclusive of “A and B,” unless it is clear from the context or the foregoing description that only one of A and B is intended. Further, the recitation of “at least one of A, B and C” should be interpreted as one or more of a group of elements consisting of A, B and C, and should not be interpreted as requiring at least one of each of the listed elements A, B and C, regardless of whether A, B and C are related as categories or otherwise. Moreover, the recitation of “A, B and/or C” or “at least one of A, B or C” should be interpreted as including any singular entity from the listed elements, e.g., A, any subset from the listed elements, e.g., A and B, or the entire list of elements A, B and C.

Claims

1. A storage assembly for storing an aerosol-generating material, the storage assembly comprising: a storage member provided with a storage cavity configured to store the aerosol-generating material and an exhaust channel configured to discharge an aerosol, the storage member comprising a light-transmitting material so as to allow observation of the aerosol-generating material in the storage cavity from outside of the storage member, a column being arranged in the storage cavity, the exhaust channel being at least partially located in the column; and a blocking member arranged in the storage cavity, wherein the column passes through the blocking member.
2. The storage assembly of claim 1, wherein the blocking member is provided with an accommodating cavity and a communicating hole, wherein the accommodating cavity is in communication with the storage cavity through the communicating hole, wherein the communicating hole is configured to flow aerosol-generating material out of the accommodating cavity, and wherein the accommodating cavity is located above the communicating hole in a height direction of the column.
3. The storage assembly of claim 1, wherein two ends of the blocking member in an extending direction of the column abut against an inner wall of the storage cavity.
4. The storage assembly of claim 1, wherein an outer side surface of the column in an extending direction of the column is tapered, wherein the blocking member is provided with a through mounting hole, wherein an inner wall of the mounting hole is tapered in the extending direction of the column, and wherein the inner wall of the mounting hole is attached to the outer side surface of the column in the extending direction of the column.
5. The storage assembly of claim 1, wherein the storage member comprises a supply channel in communication with the storage cavity, the supply channel being configured to flow the aerosol-generating material out of the storage cavity, and wherein the blocking member is spaced apart from an inlet of the supply channel.
6. The storage assembly of claim 5, wherein the column extends in a first direction, and wherein, on a projection plane perpendicular to the first direction, a projection of the inlet of the supply channel is located within a projection range of the blocking member.
7. The storage assembly of claim 1, wherein the column extends in a first direction, wherein the storage member comprises a supply channel in communication with the storage cavity, wherein the supply channel is configured to flow the aerosol-generating material out of the storage cavity, and wherein, on a projection plane perpendicular to the first direction, a projection of an inlet of the supply channel is at least partially located on an outer side of a projection of the blocking member

away from a projection of the column.

8. The storage assembly of claim 1, wherein the column extends in a first direction, wherein the storage member comprises a supply channel in communication with the storage cavity, wherein the supply channel is configured to flow the aerosol-generating material out of the storage cavity, wherein the blocking member is provided with a through airflow guiding channel, a first end of the airflow guiding channel being in communication with the storage cavity, and wherein, on a projection plane perpendicular to the first direction, a projection of the inlet of the supply channel is at least partially located within a projection range of an opening of a second end of the airflow guiding channel.

9. The storage assembly of claim 1, wherein the column and the blocking member slidably fit in an extending direction of the column, and wherein a material density of the blocking member is less than a material density of the aerosol-generating material.

10. An aerosol-generating device, comprising: an atomization core; a power supply assembly; and the storage assembly of claim 1, wherein the power supply assembly is electrically connected to the atomization core, wherein the atomization core is configured to atomize the aerosol-generating material to form the aerosol, and wherein the atomization core is in communication with the exhaust channel.