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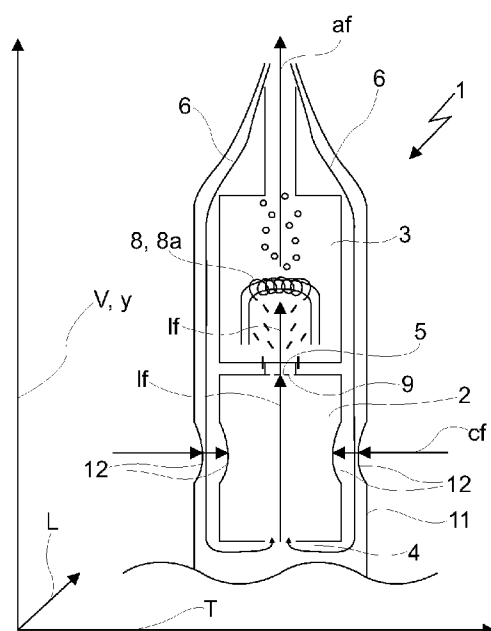


Fig. 1

(57) Abstract: The present invention relates to an aerosol generating device (1) comprising a first reservoir (2), a second reservoir (3) and a mouthpiece (7) sequentially arranged one after another along a predefined direction (V). The first reservoir comprises an aerosolizable liquid which is transportable towards the second reservoir through at least one opening (5) thereby creating a liquid flow path (lf). The aerosol generating device further comprises at least one aerosol generating unit (8) arranged in the second reservoir for generating inhalable aerosol which flows to the mouthpiece thereby creating an aerosol flow path (af). According to the invention, the first reservoir comprises a mechanically deformable failure area (9) which allows a predefined transportation of the aerosolizable liquid along the liquid flow path as consequence of a force application (cf) on the first reservoir. The invention relates also to a first reservoir comprising a failure area.

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Aerosol generating device comprising a reservoir with a failure area

Description

The present invention relates to an aerosol generating device comprising a reservoir with a failure area. The invention also relates to such first reservoir with the failure area.

There are several e-vapor devices known and available on the market and the most of them have issues such as leakage of the e-liquid. It is typically caused by the liquid flowing of the air inlet of and excessive flow to the vapor generating unit which then floods and leaks from the mouthpiece. The leaked liquid prepares also several problems in the device. One of them is the sticking together of the mechanical, electrical and/or electronic components thereby leading to the fact that the device can no longer be used.

It is therefore the objective of the invention to improve the liquid flow from one reservoir to another reservoir within an aerosol generating device thereby avoiding the leakage. Furthermore, the objective of the invention is to provide such an aerosol generating device and a corresponding reservoir.

The above-mentioned requirement is met by the object of claim 1. Preferred embodiments are objects of the dependent claims.

An aerosol generating device according to the invention comprises a first reservoir, a second reservoir and a mouthpiece sequentially arranged one after another along a predefined direction. Preferably the predefined direction runs along a fictional axis, preferably an y-axis. The

first reservoir comprises an aerosolisable liquid which is transportable towards the second reservoir through at least one opening thereby creating a liquid flow path.

Preferably the second reservoir comprises at least the aerosolized liquid. The aerosol generating device further comprises at least one aerosol generating unit arranged in the second reservoir for generating inhalable aerosol which flows to the mouthpiece thereby creating an aerosol flow path. Preferably the liquid flow path and the aerosol flow path are both parallel to the y-axis. Preferably the aerosol generating unit is arranged directly next to the opening of the first reservoir. In this context "directly next to the opening" means that the aerosol generating unit is in liquid connection at least during the use of the device.

The aerosol generating device according to the invention is characterized in that the first reservoir comprises a mechanically deformable failure area, preferably several deformable failure areas, which allows a predefined transportation of the aerosolisable liquid along the liquid flow path as consequence of a force application on the first reservoir.

The aerosolisable liquid comprised in the first reservoir is preferably heated up by the aerosol generating unit thereby generating a vapor. Preferably the generated vapor cools down and condenses thereby forming an inhalable aerosol. Due to this, the first reservoir preferably comprises a flavored liquid with which a smokable or inhalable aerosol can be formed.

In a preferred embodiment, the applied force on the first reservoir leads to a reversible elastic deformation of the failure area. In this case, the deformation of the failure area is preferably non-permanent. The failure area preferably returns to the original state, when the force application no longer lasts. Due to this, preferably the first reservoir and/or its failure areas comprises at least a material with a high elasticity. The advantage of the reversible deformation is, that the first reservoir, in particular its opening, is preferably closed again as soon as the force no longer acts. This can be achieved by the opening which can be opened during the force application. The elastic material of the failure area preferably expands during the force application and thus exposes the opening.

Preferably the first reservoir comprises a rigid surrounding wall with a non-rigid part being the failure area. In this context a surrounding wall means that one or a number of walls surround a volume thereby forming a reservoir with at least one opening for supplying the aerosol gen-

erating unit and another opening as an air inlet. Preferably the primary reservoir with a greatest fullness or fill level comprises a volume in range of 5 ml and 30 ml, preferably 7 ml and 20 ml, also preferably 8 ml and 15 ml, most preferred 10 ml. It is advantageous to provide a first reservoir with a volume surrounded by the non-rigid wall with at least a usual volume for
5 reservoirs fur use in the aerosol generating devices.

In another preferred embodiment, the applied force on the first reservoir leads to an irreversible plastic deformation of the failure area. In this case, the deformation of the failure area is preferably permanent. Preferably the failure area does not return to the original state, when
10 the force application no longer lasts. Also preferably the reservoir and/or its failure area comprises at least a material with a high plasticity. The advantage of the irreversible deformation is, that the first reservoir is preferably safe from tampering. Preferably the failure area serves as an internal safety mark or indicator.

Preferably the failure area or the first reservoir comprises a predetermined breaking point defined by a structure, shape or design that preferably breaks predictably under applied force. Preferably such breaking point is a notch, a perforation or a scribe mark which decisively weakens the failure area by the notch effect. Also preferably the failure area is preferably connected to an external safety mark or indicator. In this case, the consequence is that the
20 user can see, if the first reservoir is tampered from the outside of the aerosol generating device. Such external safety mark could preferably be an external deformation of a housing of the device which is visible from the outside.

Preferably the second reservoir particularly meets the purpose of an aerosolization chamber.
25 The aerosolisable liquid leaded to the second reservoir preferably touches or reaches the aerosol generating unit which preferably represents an end section of the liquid flow path. Furthermore, the aerosol generating unit also preferably represents an initial section of the aerosol flow path.

Preferably the aerosolisable liquid is extractable by a mechanical force application on the first reservoir and/or a housing of the aerosol generating device. Also preferably the force application on the first reservoir and/or the housing results by pressing on at least one predefined pressing area or by displacing of the mouthpiece regarding to the housing of the aerosol generating device.
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Additionally or alternatively, the first reservoir is preferably sealed in a gas-tight manner. The aerosolisable liquid comprised in the sealed first reservoir is preferable extractable by pressing the liquid into at least the second reservoir. As the user pushes the aerosolisable liquid himself to the aerosol generating unit and the second reservoir, he has the control about supplying the aerosol generating unit with liquid.

Additionally or alternatively, the second reservoir preferably comprises at least one protrusion being an actuator. Preferably the protrusion or actuator applies force to the failure area of the first reservoir.

In another embodiment, the aerosol generating device, especially the first reservoir, preferably comprises means for determining the fill level of the aerosolisable liquid in the first reservoir. It is conceivable to determine the fill level of the first reservoir by several methods, for example weight change of the first reservoir.

According to another embodiment, the force can be effected at least in part along a longitudinal and/or transversal direction of the aerosol generating device resulting a compression of the aerosol generating device and extraction of the aerosolisable liquid. The longitudinal and transversal directions are perpendicular to the predefined direction of the aerosol generating device and to each other.

Preferably the failure area of the first reservoir is irreversible or reversible deformable due to the compression. In case of the irreversible deformation, the first reservoir preferably supplies the aerosol generating unit with the aerosolisable liquid after a breakage of the failure area.

Preferably the first reservoir and/or the second reservoir comprise means for liquid transportation. Preferably the second reservoir comprises a tube being a liquid leading channel which is insertable into the first reservoir immediately after failing and/or breaking the failure area. It is also conceivable that the second or first reservoir comprise a porous material which supplies the aerosol generating unit with liquid due to the capillary force. Preferably the porous material is a part of the aerosol generating unit, wherein at least this part is insertable into the first reservoir after breaking the failure area.

According to another embodiment, the first reservoir of the aerosol generating device is deformable at least in part along the longitudinal and/or transversal direction. Preferably the aer-

osol generating device further comprises one or more failure areas which are deformable similar to the failure areas of the first reservoir. Due to this, the aerosol generating device is preferably compressible along the longitudinal and/or transversal direction thereby causing the deformation of the first reservoir.

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According to another embodiment, a housing of the aerosol generating device is deformable at least in part along the longitudinal and/or transversal direction. Also preferably the housing comprises failure areas for transmitting the applied force on the first reservoir. Preferably the failure areas of the device and/or the housing comprise at least buttons or pressure points which exert the force on the first reservoir.

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According to another embodiment, the force can be effected at least in part along or against the predefined direction. Preferably the mouthpiece of the aerosol generating device is movable connected to the housing of the aerosol generating device. Preferably the aerosolizable liquid is extractable off the first reservoir by shifting the mouthpiece along the predefined direction, preferably y-axis, regarding to the housing. It is conceivable that the second reservoir is mechanically connected to the mouthpiece. In this case, the second reservoir is preferably moveable simultaneously to the mouthpiece. Preferably the movement of the second reservoir causes the irreversible or reversible deformation of the failure area of the first reservoir.

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In a preferred embodiment, it is conceivable that the mouthpiece is preferably fixable to the housing. In this case, preferably the failure area of the first reservoir is irreversible deformed.

According to another embodiment, the aerosol generating unit comprises means for generating aerosol, preferably a coil, also preferably a heater.

25

The aerosol generating unit preferably comprises a heater and/or another components for aerosolization of the liquid. Preferably the leaded aerosolizable liquid of the first reservoir touches a surface of the aerosol generating unit, particularly of the heater. It is therefore particularly advantageous to arrange the aerosol generating unit parallel to the opening of the first reservoir. This eliminates the need for mechanical guiding the aerosolizable liquid via liquid channel.

30

It is possible to use an aerosol generating unit which is formed as a heating ring especially with a narrow through-hole. The through-hole preferably comprises a diameter in range of 0.5 mm and 3 mm, also preferably of 0.8 and 1.5 mm. The heating ring preferably comprises at

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least heating surfaces which aerosolize the aerosolisable liquid by getting in contact. Preferably the liquid flow path passes through the heating ring and ends there. Due to this, the user can control the liquid flow between two reservoirs and additionally minimize leakage by only drawing on the mouthpiece. The reliable liquid supply of the aerosol generating unit is preferably guaranteed.

Preferably the heater vaporizes the aerosolisable liquid to produce aerosol or vapor. Also preferably the heater comprises at least one resistive heater coil and a wick, which extends therethrough. Preferably the wick delivers the aerosolisable liquid via capillary force thereby supplying the coil or heater with the liquid. It is conceivable that such heater is arranged in the second reservoir. In this case the second reservoir is in fluid connection to the first reservoir at least during and/or after applying force on the first reservoir. Preferably the aerosolisable liquid is collectable at least in a part of the second reservoir which supplies the aerosol generating unit, preferably the heater or wick and coil, with the liquid. Due to this, it is conceivable that the aerosol generating unit, preferably the heater, is in fluid connection at least to the second reservoir.

According to another embodiment, the mouthpiece is movable with respect to the housing of the aerosol generating device along and/or against the predefined direction, wherein the mouthpiece provides force on the first reservoir and/or the failure area.

In a preferred embodiment, the mouthpiece is preferably shiftable along the predefined direction of the device together with the second reservoir. It is conceivable that the whole first reservoir comprises flexible material which is compressible thereby causing extracting of the aerosolisable liquid. It is also conceivable that the mouthpiece, preferably but not necessarily with the second reservoir, are movable to the initial position thereby causing relaxation of the failure area or the first reservoir. Preferably a shifting distance of the mouthpiece and/or the second reservoir is proportional to a fill level of the first reservoir.

According to another embodiment, a fibrous material, preferably a wick, comprised in the second reservoir supplies the aerosol generating unit with the aerosolisable liquid. Preferably the wick comprises cotton or other fibrous materials for supplying the coil with the liquid.

According to another embodiment, the first reservoir comprises a non-rigid material at least in part. Preferably the non-rigid material comprises flexible polymers, silicones or elastic rubber.

According to another embodiment, the second reservoir comprises at least one channel which leads the generated aerosol from the aerosol generating unit to the mouthpiece. Preferably the aerosol leading channel is mechanically connected to the mouthpiece and/or the second reservoir.

According to another embodiment, the opening is a nozzle, preferably a one way nozzle, which seals the first reservoir against the liquid flow path. Preferably the nozzle is an annular nozzle. Also preferably the nozzle comprises a cone body with an interior fluid manifold. The cone preferably comprises a retaining groove and a fluid groove. Preferably the opening or nozzle allows the liquid flow only in one direction along the liquid flow path preventing flow back through the opening or the nozzle. It is also conceivable to use other nozzles or valves for preventing the flow back of the aerosolisable liquid against the liquid flow path and allowing it to flow along the liquid flow path.

According to another embodiment, the opening is a mechanical and fluidic connection between the first reservoir and the second reservoir. Preferably the opening or the nozzle are sealed in a fluid tight manner, if the first reservoir does not receive force. Due to this, it is possible to prevent the leakage of the aerosol generating device.

The objective is also reached by a first reservoir for an aerosol generating device. The first reservoir, a second reservoir and a mouthpiece of the aerosol generating device are sequentially arranged one after another along a predefined direction. The first reservoir comprises an aerosolisable liquid which is transportable towards the second reservoir through at least one opening thereby creating a liquid flow path.

Thus, preferably the first reservoir for the aerosol generating device comprises the aerosolisable liquid which is transportable through at least one opening thereby creating the liquid flow path.

The first reservoir according to the invention is characterized in that the first reservoir comprises a mechanically deformable failure area which allows a predefined transportation of the aerosolisable liquid along the liquid flow path as a consequence of a force application on the first reservoir.

Such first reservoirs are preferably used at least in electronic smoking articles or the aerosol generating devices as a consumable supply. It is conceivable that the first reservoir is refillable and/or replaceable, if the reservoir is empty. In another embodiment, the aerosol generating device comprises more than one first reservoirs. In such a case, preferably the second reservoir is in fluid connection to all first reservoirs for ensuring the aerosolization of the liquid. It is particularly advantageous to use different flavors of the aerosolizable liquids for delivering different aerosol tastes with only one device. In this case, the user has no need to change the reservoirs if he would like to consume another aerosolizable liquid. Therefore, it is conceivable that the aerosol generating device further comprises means for connecting and/or disconnecting the different first reservoirs with at least the second reservoir or the aerosol generating unit. Further advantages, objectives and features of the present invention will be described, by way of example only, in the following description with reference to the appended figures. In the figures, like components in different embodiments can exhibit the same reference symbols.

The figures show:

Fig. 1 schematic cross-sectional view of an aerosol generating device comprising a first reservoir being compressible along the longitudinal and/or transversal direction;

Fig. 2 schematic cross-sectional view of an aerosol generating device comprising a mouthpiece which is shiftable along the predefined direction;

Fig. 3 schematic cross-sectional view of an aerosol generating device with shifted mouthpiece.

Figure 1 shows schematic cross-sectional view of an aerosol generating device 1 comprising a first reservoir 2 being compressible along the longitudinal and/or transversal direction L, T. Preferably the shown aerosol generating device 1 further comprises a second reservoir 3 and a housing 11 which preferably covers all components of the device 1. The housing 11 preferably comprises deformable predefined pressing areas 12. Preferably the first reservoir 2 comprises aerosolizable liquid. Preferably the housing 11 comprises a mouthpiece especially as a part of the housing 11.

Preferably the first reservoir 2 comprises predefined pressing areas 12 which are reversible or irreversible deformable, if the user applies force cf on them along the longitudinal and/or transversal axis L, T. Preferably the pressing areas of the housing 11 are in direct contact to the pressing areas 12 of the first reservoir 2 during the force application cf . During the force application cf , the first reservoir 2 preferably extracts an aerosolisable liquid through an opening 5.

Preferably the first reservoir 2 comprises at least one air inlet 4 for pressure equalization inside the reservoir 2 after pressing on the predefined pressing areas 12. It is conceivable that the air inlet 4 is arranged parallel to the opening 5 in the bottom of the first reservoir. But it is also possible to arrange the air inlet in another position. Also preferably, an air flow path 6 is defined by the air which is ingested in the air inlet 4. Preferably the air flow path 6 pasts the first 2 and second 3 reservoirs.

Preferably the first reservoir 2 further comprises a failure area or point 9. It is conceivable that the failure area 9 comprises a tearable foil which covers the opening 5 of the first reservoir 2. In case of the preferred embodiment with the irreversible deformation of the failure area 9, it is conceivable that the first reservoir 2 is sealed with the failure area 9. After applying force cf at the first time, the failure area 9 breaks. Preferably in this case the predefined pressing areas 12 of the housing and/or the first reservoir 2 comprise buttons or other interlocking means which achieve the irreversible deformation.

In another preferred embodiment, the failure area 9 comprises an elastic foil. It is conceivable that the failure area 9 covers the opening 5 or comprises the opening 5. In this case, the failure area 9 is preferably expandable and/or contractible. During the force application cf , the failure area 9 expands and uncovers the opening 5 of the first reservoir 2. At the same time, preferably the first reservoir 2 extracts the aerosolisable liquid along a liquid flow path to an aerosol generating unit 8. When the force cf no longer acts, the failure area 9 preferably contracts and thereby covers the opening 5.

Preferably the aerosol generating unit 8 is comprised in the second reservoir 3. Also preferably the aerosol generating unit 8 comprises wick and coil 8a for generating aerosol. It is conceivable that a part of the aerosol generating unit 8, preferably the wick 8a, soaks the extracted aerosolisable liquid thereby supplying the aerosol generating unit 8 with the liquid.

Preferably the coil 8a heats the soaked liquid in the wick thereby creating vapor which cools down and generates inhalable aerosol.

5 In another embodiment, the applied force cf achieves that the liquid bursts out of the first reservoir 2 thereby reaching the aerosol generating unit 8 or the coil 8a directly.

Preferably the generated aerosol flows along an aerosol flow path af to the mouthpiece 7, in particular to an opening in the mouthpiece.

10 Figures 2 and 3 show a schematic cross-sectional view of an aerosol generating device 1 comprising a mouthpiece 7 which is shiftable or movable along the predefined direction V. The shown aerosol generating device 1 comprises a first 2 and second 3 reservoir with the aerosol generating unit 8. In particular, the shown aerosol generating device 1 is similar to the device 1 shown in figure 1. The only difference between shown devices 1 is that the first
15 reservoir 2 receives force cf along the predefined direction V, preferably via the mouthpiece 7.

In the shown embodiment, the mouthpiece 7 is a separated component of the aerosol generating device 1. Preferably the mouthpiece 7 is mechanically connected to the second reservoir 3 thereby acting as force transmission. The second reservoir 3 preferably comprises at
20 least one actuator 10, preferably a protrusion which transmits the applied force cf on the failure point 9.

In figure 2 is shown that no force cf is applied to the mouthpiece 7 and the first reservoir 2.
25 The opening 5 of the first reservoir 2 is preferably sealed or closed (as described above in figure 1). The failure area 9 is preferably in mechanical connection to the actuator 10, but the actuator 10 does not apply the force cf on the failure area 9.

In figure 3 is shown that the mouthpiece 7 applies force cf on the first reservoir 2, preferably
30 the failure area 9. The failure area 9 is preferably pressed under the effect of force cf of the mouthpiece 7. In particular, the failure area 9 is elastically deformed due to the mechanical connection to the second reservoir 3 which comprises the actuator 10. Thus, the first reservoir 2 extracts the liquid along the liquid flow path lf to the aerosol generating unit 8.

The mouthpiece 7 comprises preferably a common shape for aerosol generating devices. But it is also conceivable that the mouthpiece 7 further comprises at least one flexible part which is extendable during the force application cf (not shown). In this case, the flexible part of the mouthpiece 7 preferably extends proportional to the force application cf. However, it is conceivable that only a part of the mouthpiece 7 is movable regarding the housing 11 (not shown). In this case it is advantageous, that the movable part of the mouthpiece 7 is connected to the second reservoir 3.

In another embodiment, the mouthpiece 7 comprises a rigid material and glides along the y-axis. It is conceivable that the mouthpiece 7 is fixable in a predefined position on the housing 11 of the device 1. Therefore, the housing 11 preferably comprises fixing positions (not shown) on which the mouthpiece 7 is attachable.

The applicant reserves his right to claim all features disclosed in the application document as being an essential feature of the invention, as long as they are new, individually or in combination, in view of the prior art. Furthermore, it is noted that in the figures features are described, which can be advantageous individually. Someone skilled in the art will directly recognize that a specific feature being disclosed in a figure can be advantageous also without the adoption of further features from this figure. Furthermore, someone skilled in the art will recognize that advantages can evolve from a combination of diverse features being disclosed in one or various figures.

List of reference symbols

5	1	aerosol generating device
	2	first reservoir
	3	second reservoir
	4	air inlet
	5	opening / valve / nozzle
10	6	air flow path
	7	mouthpiece
	8	aerosol generating unit
	8a	wick and coil
	9	failure point / failure area
15	10	actuator
	11	housing of the device
	12	predefined pressing area
	af	aerosol flow path
	lf	liquid flow path
20	cf	compressing force
	V	predefined direction
	Y	y-axis
	T	transversal axis / transversal direction
	L	longitudinal axis / longitudinal direction

Aerosol generating device comprising a reservoir with a failure area

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Claims

1. An aerosol generating device (1) comprising a first reservoir (2), a second reservoir (3) and a mouthpiece (7) sequentially arranged one after another along a predefined direction (V), wherein the first reservoir (2) comprises an aerosolisable liquid which is transportable towards the second reservoir (3) through at least one opening (5) thereby creating a liquid flow path (lf), wherein the aerosol generating device (1) further comprises at least one aerosol generating unit (8) arranged in the second reservoir (3) for generating inhalable aerosol which flows to the mouthpiece (4) thereby creating an aerosol flow path (af),
- characterized in that
- the first reservoir (2) comprises a mechanically deformable failure area (9) which allows a predefined transportation of the aerosolisable liquid along the liquid flow path (lf) as consequence of a force application (cf) on the first reservoir (2).
2. Aerosol generating device (1) according to claim 1,
- characterized in that
- the force (cf) can be effected at least in part along a longitudinal and/or transversal direction (L, T) of the aerosol generating device (1) resulting a compression of the aerosol generating device (1) and extraction of the aerosolisable liquid, wherein the longitudinal and transversal directions (L, T) are perpendicular to the predefined direction (V) of the aerosol generating device (1) and to each other.
3. Aerosol generating device (1) according to any of the preceding claims,
- characterized in that
- the first reservoir (2) of the aerosol generating device (1) is deformable at least in part along the longitudinal (L) and/or transversal (T) direction.
4. Aerosol generating device (1) according to any of the preceding claims,
- characterized in that

a housing (11) of the aerosol generating device (1) is deformable at least in part along the longitudinal (L) and/or transversal (T) direction.

5. Aerosol generating device (1) according to any of the preceding claims,
5 characterized in that
the force (cf) can be effected at least in part along or against the predefined direction (V).
6. Aerosol generating device (1) according to any of the preceding claims,
10 characterized in that
the aerosol generating unit (8) comprises means for generating aerosol, preferably a coil (8a), also preferably a heater.
7. Aerosol generating device (1) according to any of the preceding claims,
15 characterized in that
the mouthpiece (7) is movable with respect to the housing of the aerosol generating device (1) along and/or against the predefined direction (V), wherein the mouthpiece (7) provides force (cf) on the first reservoir (2) and/or the failure area (9).
8. Aerosol generating device (1) according to any of the preceding claims,
20 characterized in that
a fibrous material, preferably a wick, comprised in the second reservoir (3) supplies the aerosol generating unit (8) with the aerosolisable liquid.
9. Aerosol generating device (1) according to any of the preceding claims,
25 characterized in that
the first reservoir (2) comprises a non-rigid material at least in part.
10. Aerosol generating device (1) according to any of the preceding claims,
30 characterized in that
the second reservoir (3) comprises at least one channel () which leads the generated aerosol from the aerosol generating unit (6) to the mouthpiece (7).
11. Aerosol generating device (1) according to any of the preceding claims,
35 characterized in that

the opening (5) is a nozzle (5a), preferably a one way nozzle (5a), which seals the first reservoir (2) against the liquid flow path (lf).

12. Aerosol generating device (1) according to any of the preceding claims,

characterized in that

the opening (5) is a mechanical and fluidic connection between the first reservoir (2) and the second reservoir (3).

13. Aerosol generating device (1) according to any of the preceding claims,

characterized in that

the mouthpiece (7) is connected movably to the housing (11).

14. Aerosol generating device (1) according to any of the preceding claims,

characterized in that

the breaking point is a notch, a perforation or a scribe mark which decisively weakens the failure area (9) by the notch effect.

15. Aerosol generating device (1) according to any of the preceding claims,

characterized in that

the failure area (9) is connected to an external safety mark or indicator.

16. Aerosol generating device (1) according to any of the preceding claims,

characterized in that

the first reservoir (2) comprises means for determining the fill level of the aerosolizable liquid in the first reservoir..

17. A first reservoir (2) for an aerosol generating device (1), wherein the first reservoir (2), a second reservoir (3) and a mouthpiece (4) of the aerosol generating device (1) are sequentially arranged one after another along a predefined direction (V), wherein the first reservoir (2) comprises an aerosolizable liquid (5) which is transportable towards the second reservoir (3) through at least one opening (9) thereby creating a liquid flow path (lf),

characterized in that

the first reservoir (2) comprises a mechanically deformable failure area (9) which allows a predefined transportation of the aerosolisable liquid along the liquid flow path (lf) as a consequence of a force application (cf) on the first reservoir (2).

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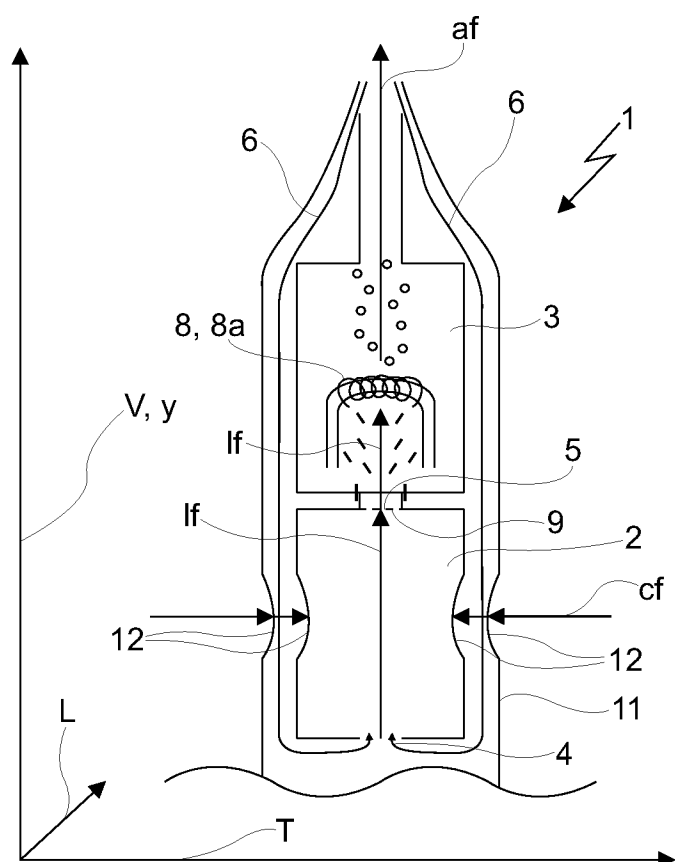


Fig. 1

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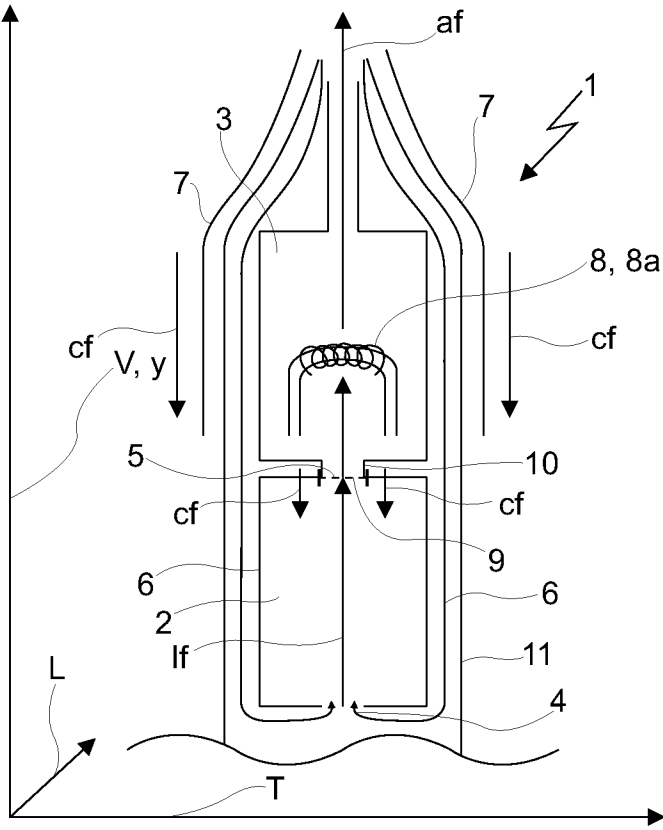


Fig. 2

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER INV. A24F40/48 ADD. A24F40/10 A24F40/30		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) A24F		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2018/249765 A1 (TUCKER CHRISTOPHER S [US] ET AL) 6 September 2018 (2018-09-06)	1-6, 8-11, 13-17
A	paragraph [0012] - paragraph [0052]; figures 1-7	7, 12

X	US 2020/114095 A1 (HOLROYD SIMON [GB] ET AL) 16 April 2020 (2020-04-16)	1, 5, 6, 8-17
A	paragraph [0055] - paragraph [0087]; figures 2a-8	2-4, 7

X	US 2018/249762 A1 (DARYANI NEHA [DE] ET AL) 6 September 2018 (2018-09-06)	1-6, 8-11, 13-17
A	paragraph [0029] - paragraph [0056]; figures 1-6B	7, 12

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☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
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Date of the actual completion of the international search		Date of mailing of the international search report
7 July 2022		21/07/2022
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Espla, Alexandre

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2022/057734

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A	paragraph [0077] - paragraph [0095]; figures 1A-12 -----	2-4
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