United States Patent Application Publication	20250261688
Kind Code	A1
Publication Date	August 21, 2025
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Aerosol Generating Device and Assembly, and Packaging Enabling Easy Grabbing of a Consumable Article

Abstract

An aerosol generating device configured to operate with a consumable article includes: a first part, defining a cavity configured to receive the consumable article and to heat the consumable article during a vaping session, the consumable article thereby generating an aerosol; and a second part, separable from the first part and including a grabber, deformable between: an open configuration, for the grabber to grab the consumable article, when the second part is separated from the first part, and a holding configuration, for the grabber to hold the consumable article, such that the consumable article is inserted into the cavity, when the first part and the second part are assembled.

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Appl. No.: **18/857353**

Filed (or PCT Filed): **April 24, 2023**

PCT No.: **PCT/EP2023/060646**

Foreign Application Priority Data

EP	22169832.7	Apr. 25, 2022

Publication Classification

Int. Cl.: **A24F40/40** (20200101); **A24F15/01** (20200101); **A24F40/10** (20200101); **B65D25/10** (20060101)

U.S. Cl.:

CPC **A24F40/40** (20200101); **A24F15/01** (20200101); **A24F40/10** (20200101); **B65D25/106** (20130101);

Background/Summary

FIELD OF THE INVENTION

[0001] The present invention concerns an aerosol generating device.

[0002] The present invention also concerns an aerosol generating assembly comprising the aerosol generating device, and a packaging for a plurality of consumable articles.

BACKGROUND OF THE INVENTION

[0003] The popularity and use of reduced-risk or modified-risk devices (also known as vaporisers) has grown rapidly in the past few years as an aid to assist habitual smokers wishing to quit smoking traditional tobacco products such as cigarettes, cigars, cigarillos, and rolling tobacco. Various devices and systems are available that heat or warm vaporizable substances as opposed to burning tobacco in conventional tobacco products.

[0004] A commonly available reduced-risk or modified-risk device is the heated substrate aerosol generation device or heat-not-burn device. Devices of this type generate aerosol or vapour by heating an aerosol substrate, but not burning the substrate, that typically comprises moist leaf tobacco or other suitable vaporizable material to a temperature typically in the range 150° C. to 350° C. The handleability of the consumable can be problematic as the consumable may be of a small volume and so be difficult to load/unload in the aerosol generation device. Part of the consumable may be sticky or wet and may soil the user's hand. Just after heating, the consumable may become too hot for a safe or acceptable skin contact. Moreover, the consumable may be mispositioned in the device during insertion due to incorrect handling of the consumable.

SUMMARY OF THE INVENTION

[0005] One of the aims of the invention is to provide an aerosol generating device enabling a convenient and safe handling of the consumable article and/or ensure a more reliable insertion of the consumable article in the device.

[0006] For this purpose, the invention relates to an aerosol generating device, configured to operate with a consumable article and comprising a first part, defining a cavity configured to receive the consumable article and to heat the consumable article during a vaping session, the consumable article thereby generating an aerosol. The aerosol generating device further comprises a second part, separable from the first part and comprising a grabber. The grabber is movable, preferably deformable, between an open configuration, for the grabber to grab the consumable article, when the second part is separated from the first part, and a holding configuration, for the grabber to hold the consumable article, such that the consumable article is inserted into the cavity, when the first part and the second part are assembled.

[0007] Thanks to these features, the second part itself may be used as a tool for grabbing the consumable article, enabling convenient handling of the consumable article even if the consumable article is small, wet or sticky, or still hot from the vaping session. The user does not have to directly touch the consumable article, or to use an external tool or device for handling it. Once the consumable article is held by the grabber of the first part, the first part itself is also used for correctly placing the consumable article in the cavity of the first part, as assembling the first part

and the second part automatically positions the consumable article into the cavity for being heated by the heating element, as the consumable article is held by the grabber. Preferably, the consumable article is held in position in the cavity by the grabber during the vaping session, while being heated. Preferably, when the grabber is in the holding configuration and holds the consumable article, the consumable article is released by moving, preferably by deforming, the grabber to the open configuration. All these features and advantages enable that the aerosol generating device is especially appropriate for single-session and/or small consumable articles.

[0008] In other words, the grabber in the open configuration enables grabbing the consumable article, in particular when said consumable article is positioned outside from the device, in particular, when the consumable article is not yet received in the cavity of the first part, in particular when the consumable article is held by a holder of a packaging, separate from the aerosol generating device. The grabber in the holding configuration enables holding the consumable article, in particular not only when the first and second parts are assembled, but also when the first part and the second part are separate.

[0009] Instead of being deformable, the grabber may be constituted of movable parts so as to be moved between the open and holding configurations, instead of being truly deformable between said open and holding configurations.

[0010] According to some embodiments, an insertion opening of the grabber, through which the consumable article is inserted in the grabber, for being grabbed by the grabber when the grabber is in the open configuration, is oriented towards the cavity when the first part and the second part are assembled.

[0011] According to some embodiments, the second part comprises a mouthpiece configured to deliver the aerosol to a user.

[0012] Thanks to these features, the second part conveniently serves both purposes of handling the consumable article and of forming the mouthpiece for the aerosol generating device, when assembled with the first part. The aerosol generating device thus requires few parts and may be very compact. Since the grabber and the mouthpiece are formed by the same second part which is separable from the first part, the mouthpiece and grabber may be easily cleaned separately from the first part. Preferably, the second part is devoid of electronics.

[0013] According to some embodiments, the grabber comprises an external surface and is configured to be moved, preferably deformed, to the open configuration by pinching of the external surface.

[0014] According to some embodiments, the external surface defines two opposite pinching zones, adapted to be pinched by user's fingers to move, preferably deform, the grabber to the open configuration.

[0015] Thanks to these features, the user may easily grab the consumable article with the second part, and preferably also release said consumable article from the second part, by a simple pressing of the second part between the user's fingers.

[0016] According to some embodiments, the grabber forms a clip for grabbing the consumable article when in the open configuration and for holding the consumable article when in the holding configuration, the clip comprising axial legs extending along opposite sides of the consumable article, for holding the consumable article when the grabber is in the holding configuration.

[0017] Thanks to these features, the consumable article is firmly grabbed and held by the grabber, between the legs of the clip.

[0018] According to some embodiments, the clip and the external surface are made of a single piece.

[0019] According to some embodiments, the legs are radially moved away from each other when the grabber is moved, preferably deformed, from the holding configuration to the open configuration, for enabling grabbing of the consumable article into the grabber.

[0020] Preferably, the same enables release of the consumable article from the grabber.

[0021] According to some embodiments, the grabber is configured to elastically return to the holding configuration when in the open configuration.
[0022] Thanks to these features, the consumable article is automatically maintained secured to the grabber when the user does not actuate the second part.
[0023] According to some embodiments, the aerosol generating device comprises abutment means, preventing the grabber to be moved to the open configuration when the first part and the second part are assembled.
[0024] Thanks to these features, the user cannot release the consumable article from the grabber when the first part and the second part are assembled, so that the consumable article cannot be released inside the cavity of the first part, and always remains held by the grabber. Misuse of the aerosol generating device is thereby prevented.
[0025] According to some embodiments, the first part comprises a heating element configured to heat the consumable article when the consumable article is received in the cavity.
[0026] Thanks to these features, the first part is equipped with all the features required to produce the aerosol from the consumable article during the vaping session. Optionally, the first part also includes a power source, such as a battery, for powering the heating element, and any control module for controlling the heating element.
[0027] According to some embodiments, the heating element is configured to at least partially surround and/or to penetrate the consumable article when the consumable article is received in the cavity.
[0028] The invention also relates to an aerosol generating assembly, comprising the aerosol generating device as defined above and the consumable article. The consumable article comprises a porous element storing a liquid that is able to generate the aerosol when heated in the cavity.
[0029] Thanks to these features, the consumable article is environmentally friendly, since the consumable article requires reduced material, features and packaging, compared to a disposable liquid cartridge, usually integrating a heating element and a solid container for holding the liquid.
[0030] According to some embodiments, the consumable article is a single-session consumable article. A session is generally meant to be a predetermined period of time and/or a predetermined number of puffs during which the consumable in the device delivers aerosol.
[0031] According to some embodiments, the consumable article has a volume less than 1000 mm.sup.3, preferably less than 500 mm.sup.3 and advantageously less than 200 mm.sup.3, preferably between 50 and 190 mm.sup.3.
[0032] The invention also relates to a packaging for a plurality of consumable articles, the packaging comprising a holder, defining a plurality of sockets or seats, wherein each socket or seat is respectively configured to receive one of the consumable articles, wherein the consumable article protrudes from the holder when received in the socket or seat so that the grabber of the aerosol generating device as defined above may grab said consumable article.
[0033] Thanks to these features, the consumable articles are readily arranged in the packaging, in a manner enabling convenient grabbing of the consumable articles by the grabber. Preferably, once the vaping session is over, the user may release the exhausted consumable article with the grabber, in a manner to position said consumable article in the same socket or seat where said consumable article was initially positioned, or in another free socket or seat.
[0034] According to some embodiments, the holder is flat-shaped and the sockets or seats are arranged in rows and/or columns along the holder.
[0035] According to some embodiments, instead of the grabber being moved to the open configuration for grabbing the consumable article, the consumable article is inwardly deformable for being grabbed by the grabber as the grabber is in the holding configuration. The grabber may be deformed to the open configuration as the consumable is held therein, for releasing said consumable article.
[0036] According to an embodiment independent from the invention disclosed above, the grabber is

in the holding configuration without being movable or deformable to the open configuration. In this case, the consumable article is inwardly deformable for being grabbed by the grabber as the grabber is in the holding configuration and is released from the grabber by pulling out the consumable article from the grabber. This independent embodiment may optionally include all or part of the other features defined for the invention, when technically compatible with the independent embodiment.

Description

BRIEF DESCRIPTION OF THE DRAWINGS

[0037] The invention and its advantages will be better understood upon reading the following description, which is given solely by way of non-limiting examples and which is made with reference to the appended drawings, in which:

[0038] FIG. **1** is a perspective view of the aerosol generating assembly according to the invention, including an aerosol generating device with a first part and a second part thereof, which are separated, a grabber of the second part being in a holding configuration and holding a consumable article;

[0039] FIG. **2** is a schematic longitudinal cross-section of the second part and of the consumable article of FIG. **1**, the grabber being in an open configuration;

[0040] FIG. **3** is a schematic longitudinal cross-section of the aerosol generating assembly of FIGS. **1** and **2**, where the first part and the second part are separated and where the grabber holds the consumable article in the holding configuration;

[0041] FIG. **4** is a schematic longitudinal cross-section similar to FIG. **3**, where the first part and the second part are assembled;

[0042] FIG. **5** is a partial perspective view of the aerosol generating assembly shown in FIGS. **1**-**4** and of a packaging according to the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0043] Before describing the invention, it is to be understood that it is not limited to the details of construction set forth in the following description. It will be apparent to those skilled in the art having the benefit of the present disclosure that the invention is capable of other embodiments and of being practiced or being carried out in various ways.

[0044] As used herein, the term “aerosol generating device” or “device” may include a vaping device to deliver an aerosol to a user, including an aerosol for vaping, by means of aerosol generating unit (e.g. an aerosol generating element which generates vapor which condenses into an aerosol before delivery to an outlet of the device at, for example, a mouthpiece, for inhalation by a user). The device may be portable. “Portable” may refer to the device being for use when held by a user. The device may be adapted to generate a variable amount of aerosol, e.g. by activating a heater system for a variable amount of time (as opposed to a metered dose of aerosol), which can be controlled by a trigger. The trigger may be user activated, such as a vaping button and/or inhalation sensor. The inhalation sensor may be sensitive to the strength of inhalation as well as the duration of inhalation to enable a variable amount of vapor to be provided (so as to mimic the effect of smoking a conventional combustible smoking article such as a cigarette, cigar or pipe, etc.). The device may include a temperature regulation control to drive the temperature of the heater and/or the heated aerosol generating substance (aerosol pre-cursor) to a specified target temperature and thereafter to maintain the temperature at the target temperature that enables efficient generation of aerosol.

[0045] As used herein, the term “aerosol” may include a suspension of precursor as one or more of: solid particles; liquid droplets; gas. Said suspension may be in a gas including air. Aerosol herein may generally refer to/include a vapor. Aerosol may include one or more components of the

precursor.
[0046] As used herein, the term “aerosol-forming precursor” or “precursor” or “aerosol-forming substance” or “substance” or “vaporizable material” is used to designate any material that is vaporizable in air to form aerosol. Vaporisation is generally obtained by a temperature increase up to the boiling point of the vaporization material, such as at a temperature up to 400° C., preferably up to 350° C. The vaporizable material may, for example, comprise or consist of an aerosol-generating liquid, gel, or wax or the like or an aerosol-generating solid that may be in the form of a rod, which contains processed tobacco material, a crimped sheet or oriented strips of reconstituted tobacco (RTB), or any combination of these. The vaporizable material may comprise one or more of: nicotine; caffeine or other active components. The active component may be carried with a carrier, which may be a liquid. The carrier may include propylene glycol or glycerin.

DETAILED DESCRIPTION OF AN EMBODIMENT OF THE INVENTION

[0047] FIG. **1** shows an aerosol generating assembly comprising a consumable article **1** and an aerosol generating device **2**. The aerosol generating device **2** is configured to operate with the consumable article **1** for achieving a vaping session. When the consumable article **1** is exhausted, it has to be replaced with a new consumable article, operated by the same aerosol generating device **2**.
[0048] Preferably, the consumable article **1** is crossed by a longitudinal axis X**10**. The consumable article **1** is preferably cylindrical or tubular shaped, and centered on the axis X**10**. The consumable article **1** comprises a porous element **11** storing a liquid that is able to form the aerosol when heated in an appropriate manner. The porous element **11** is for example made of a solid foam, the pores thereof being impregnated with the liquid. The porous element may also be formed of a fibrous layer (such as nonwoven or a tobacco layer) on a rigid support such as a tubular element (e.g., paper tube). The consumable article **1** preferably defines a channel **12** along axis X**10**, through the porous element **11**, for the circulation of the aerosol.
[0049] The consumable article **1** optionally has an external tubular housing, centered on the axis X**10**, surrounding the porous element **11**. The external tubular housing holds the porous element **11** and is made of a rigid material such as metal or plastic.
[0050] Preferably, the consumable article **1** is a single-session consumable article, i.e. an article that is dimensioned for a single vaping session. To this end, for example, the article **1** contains a quantity of liquid for ensuring approximately 5-40 puffs, preferably approximately 10 to 20 puffs. The size of the consumable article **1** is preferably less than 1000 mm.sup.3, more preferably less than 500 mm.sup.3 or even less than 200 mm.sup.3.
[0051] The aerosol generating device **2** comprises a first part **20** and a second part **40**. In FIG. **1**, the parts **20** and **40** are separate, i.e. disassembled, as also shown in FIG. **3**. The parts **20** and **40** may also be assembled as shown in FIG. **4**.
[0052] The first part **20** is centered on a longitudinal axis X**20** and the second part **40** is centered on a longitudinal axis X**40**, which become coaxial when assembled. For example, when the parts **20** and **40** are assembled, the device **2** has an elongated shape along the axes X**20** and X**40**, such as a cylinder shape centered on the axes X**20** and X**40**.
[0053] The second part **40** comprises a grabber **41**, a mouthpiece **44** and a coupling end **43**. The mouthpiece **44** and the grabber **41** are successively arranged along axis X**40**, and each crossed through by axis X**40**. The coupling end **43** is preferably arranged around the grabber **41**. The mouthpiece **44** forms one longitudinal end of the part **40** and of the device **2** when the parts **20** and **40** are assembled. The grabber **41** and/or the coupling end **43** form an opposite longitudinal end of the part **40** and constitutes an interface for assembling part **20** and **40**.
[0054] The mouthpiece **44** is configured to be brought to the user's mouth during the vaping session, for the user to inhale the aerosol generated by the device **2** at each puff. The mouthpiece **44** preferably defines an aerosol channel **45**, for guiding the aerosol from the grabber **41** to the mouth of the user. The channel **45** is for example centered on the axis X**40** and extends throughout the

mouthpiece **44**. The mouthpiece **44** is preferably made of a rigid material such as plastic.
[0055] The coupling end **43** of the second part **40** is complementary with a coupling end **23** of the first part **20**, for enabling coupling of the parts **20** and **40** together, parallel to the axes X**20** and X**40**, and decoupling of the parts **20** and **40** from one another. The coupling end **43** is preferably centered on axis X**40**, while the coupling end **23** is centered on axis X**20**. For example, the coupling ends **23** and **43** may be coupled in a male/female manner, as shown in FIG. **4**. When the coupling ends **43** and **23** are coupled as shown in FIG. **4**, the parts **20** and **40** are assembled. For separating the parts **20** and **40** from each other, the coupling ends are uncoupled, as shown in FIG. **3**. Preferably, the coupling end **43** and the grabber **41** are made of a single piece, which is assembled with the mouthpiece **44**, constituting another single piece.
[0056] The grabber **41** is movable between an open configuration, shown in FIG. **2**, and a holding configuration, shown in FIGS. **1**, **3** and **4**. Preferably, as shown in said FIGS. **1**, **3** and **4**, the grabber **41** is moved between the open and holding configuration by deformation of the grabber **41**.
[0057] Preferably, in use, the grabber **41** is deformed to the open configuration only when the parts **20** and **40** are separated. In the open configuration, the grabber **41** enables grabbing, i.e. inserting, of the consumable article **1** into the grabber **41**, if the grabber **41** did not hold any consumable article, and release of the consumable article **41** if said consumable article **1** was held by the grabber **41**. In the open configuration, the insertion of the article **1** into the grabber **41** is obtained by insertion of the article **1** into an insertion opening of the grabber **41**, formed at an end of the second part **40**.
[0058] In the holding configuration, the article **1** is secured in the grabber **41**, i.e. to the part **40**. Preferably, in the holding configuration, the article **1** is positioned at a same end of the part **40** than the end through which the article **1** was grabbed. In other words, the article **1** preferably does not need to be inserted throughout the second part **40**, from an end opposite to the grabber **41**, for being received in the grabber **41**.
[0059] Preferably, the grabber **41** is configured to elastically return to the holding configuration when in the deformed configuration. In other words, the grabber **41** has to be elastically deformed away from a rest configuration, for reaching the open configuration. The rest configuration may be the holding configuration, or another configuration to which the grabber elastically returns when the grabber **41** does not hold any consumable article.
[0060] More precisely, the grabber **41** preferably forms a clip **42** for grabbing the article **1**. The clip **42** is advantageously centered on axis X**40** and surrounds the article **1** when in the holding configuration. The clip **42** enables the grabber **41** to grab and hold the consumable article **1**. At least the clip **42** is deformed or moved when the grabber **41** is deformed. For example, the clip **42** comprises axial legs **46**, for example four axial legs **46**, as best visible in FIG. **1**. In the holding configuration, the axial legs **46** are close to the axis X**40**, preferably parallel to axis X**40**, and extend along opposite sides of the consumable article **1**, for holding the consumable article **1**. Preferably, the legs **46** are arranged all around the article **1**. In the open configuration, the legs **46** are radially moved away from each other i.e. from axis X**40**, as best visible in FIG. **2**, for enabling grabbing and releasing of the consumable article **1**. For example, in the open configuration, the legs **46** are arranged conically relative to the axis X**40**, enabling insertion and release of the article **1**.
[0061] Thus, when no consumable article is held by the grabber **41**, the part **40** may be brought by the user to the desired consumable article **1**, as part **40** is separate from part **20**. The user may deform the grabber **41** into the open configuration, enabling grabbing of the article **1** by the grabber **41**. Once the article **1** is received within the grabber **41**, the user deforms the grabber **41** into the holding configuration so that the grabber is held i.e. secured to the grabber **41**. The user may then assemble part **20** and part **40** together for starting a vaping session, or release the article **1** by again deforming the grabber **41** into the open configuration. After the vaping session is done, the user may separate part **20** from part **40** and release the exhausted article **1** by again deforming the grabber **41** into the open configuration.

[0062] Preferably, the second part **40** comprises an external surface **47**, which may advantageously form a single piece with the grabber **41** and/or with the coupling end **43**. Preferably, the external surface **47** is tubular and centered on axis X**40**. The external surface **47** preferably surrounds the grabber **41**. The external surface **47** preferably connects the coupling end **43** to the mouthpiece **44**.
[0063] The grabber **41** is configured to be deformed from the holding configuration to the open configuration by pinching of the external surface **47**, i.e. by applying opposite forces directed radially towards the axis X**40** onto the external surface **47**. As best shown in FIG. **2**, the external surface **47** advantageously defines two diametrically opposite pinching zones **48**, adapted to be pinched by user's fingers to deform the grabber **41** to the open configuration. For example, for the external surface **47** to actuate the deformation of the grabber **41**, the external surface **47** is connected to the grabber **41** by means of radial spokes **49**, which impart a lever action onto the clip **42**, so that the pin opens when the surface **47** is pinched by the user.
[0064] Preferably, for preventing the grabber **41** to be deformed to the open configuration when the parts **20** and **40** are assembled, the aerosol generating device **2** comprises an abutment surface **28**, which maintains the grabber **41** in the holding configuration when the parts **20** and **40** are assembled. For example, the abutment surface **28** is formed by the coupling end **23** of the part **20**, which rigidly opposes to the pinching of the external surface **47** when the parts **20** and **40** are assembled. More precisely, as shown in FIG. **4**, the coupling end **23**, including the surface **28**, is preferably inserted into the coupling end **43** when the parts **20** and **40** are assembled, so as to be radially interposed between axis X**20** and the external surface **47**. In this situation, the user cannot pinch the external surface **47**, since the external surface **47** abuts the surface **28** radially inwards.
[0065] Preferably, the grabber **41** also defines a channel **50**, which connects the channel **45** to the article **1**, when said article **1** is held by the grabber **41** in the holding configuration. The channel **50** is preferably centered on the axis X**40**. Thus, the aerosol generated by the article **1** may reach the user's mouth through the successive channels **50** and **45**.
[0066] Preferably, in the holding configuration, the article **1** is positioned so that the axis X**10** is coaxial with axis X**40**. Preferably, when the article **1** is held by the grabber **41**, the channel **12** is centered on axis X**40**, so that the channel **12** is connected to the channel **50**.
[0067] Preferably, the grabber **41** is configured so that, when the article **1** is held by the grabber **1** in the holding configuration, one longitudinal end of the article **1** is connected to the mouthpiece **44** through the channel **50**, while another opposite longitudinal end of the article **1** is left free, for interacting with part **20** when the parts **20** and **40** are assembled, as defined below.
[0068] The first part **20** comprises the above-mentioned coupling end **23**, but also a cavity **22**, and preferably a housing **21** and a heating element **24**. Preferably, the coupling end **23** and the cavity **22** are formed at one longitudinal end of part **20**, along axis X**20**, directed towards the part **40** when the parts **20** and **40** are assembled. For example, the coupling end **23** is formed around the cavity **22**. Preferably, the coupling end **23** and the cavity **22** are centered on axis X**20**, and crossed through by said axis X**20**.
[0069] The cavity **22** opens towards the second part **40**. As best seen in FIG. **4**, when the parts **20** and **40** are assembled, the consumable article **1** held by the grabber **41** is received in the cavity **22**. In other words, when the grabber **41** is in the holding configuration, the grabber **41** holds the consumable article **1**, such that the consumable article **1** is inserted into the cavity **22**, when the parts **20** and **40** are assembled, while the consumable article **1** is held by the grabber **41**. Advantageously in this configuration, the insertion opening of the grabber **41**, through which the article **1** was earlier inserted in the grabber **41**, is oriented towards the cavity **22**, or is even received in the cavity **22**.
[0070] During assembling of the parts **20** and **40**, the grabber **41** holds the article **1** in a position that brings and inserts the article **1** into the cavity **22**. Preferably, during the vaping session, the grabber **41** holds the article **1** in position inside the cavity **22** and remains in the holding configuration. The cavity **22** itself may optionally contribute to hold the consumable article **1**

during the vaping session when the parts **20** and **40** are assembled. During separation of the parts **20** and **40**, the grabber **41** holds the article **1** so as to extract said article **1** from the cavity **22**.
[0071] The heating element **24** is configured to heat the consumable article **1**, when said consumable article **1** is received in the cavity **22**, while being held by the grabber **41** in the holding configuration, and while the parts **20** and **40** are assembled. As shown in FIGS. **3** and **4**, the heating element **24** may protrude inside the cavity **22**, for example along axis X**20**. In this case, the heating element **24** penetrates the consumable article **1** when the consumable article **1** is received in the cavity **22**. For example, the heating element **24** is inserted inside the channel **12** of the article **1**. In this case, the heating element **24** may be a blade heater or a pin heater. Thus, the heating element heats the article **1** from inside the article **1**. Alternatively, the heating element **24** may be surrounding the cavity **22** or forming the sidewall of the cavity **22** or in contact with sidewall of the cavity **22**. In this case, the heating element **24** can be a thin film heater or an inductive coil. In this last case, the inductive coil may cooperate by magnetic induction with one or several susceptors arranged inside the consumable article **1** or designed to penetrate the consumable article **1**. Preferably, in case the article **1** does not need to be penetrated while in the cavity **22**, e.g. by the heating element or susceptors, the article **1** does not have to be hollow, in particular does not need to have the channel **12**.
[0072] For generating the aerosol during the vaping session, the heating element **24** heats the article **1** without burning the article **1**, which causes vaporization of the liquid contained in the article **1**, forming the aerosol. The generated aerosol flows through the channels **50** and **45** to the mouth of the user to be inhaled by the user.
[0073] The housing **21** of the first part **20** forms a longitudinal end of part **20** which is opposite to the coupling end **23**. The coupling end **23**, the cavity **22** and the heating element **24** are secured with the housing **21**.
[0074] Preferably, the first part **20** further comprises an embedded power source **25** and a control module **26**, which are received in the housing **21**. The power source **25** may be formed by a battery or the like, and powers the heating element **24** for enabling the heating element **24** to heat the article **1**. Part **20** preferably includes a charging port **27** for recharging the embedded power source **25**. The control module **26** is an electronic module which controls how and when the heating element **24** heats the article **1**. The electronic module **26** may include a memory containing a program code and a processor for executing the program code and thereby controlling the heating element **24**. For properly controlling the heating element **24**, the electronic module **26** may be coupled to sensors, preferably installed in part **20**, for determining if the heating element **24** is active and/or sensors for measuring its current temperature, for determining if the parts **20** and **40** are assembled. For being controlled by the user, the heating element **24** may be coupled to interface elements, preferably installed in part **20**, such as buttons, screen, touchscreen.
[0075] The aerosol generating device **2** may also be used in connection with a packaging **70** shown in FIG. **5**.
[0076] The packaging **70** is configured for containing a plurality of consumable articles **1** to be operated with the device **2**. The packaging **70** comprises a holder **71**, which is preferably planar-shaped, i.e. flat-shaped. The packaging **70** also comprises sockets **72**, formed by the holder **71**. Each socket **72** preferably forms a blind hole punched into the holder **71**. Each socket **72** opens from the same side of the holder **71**. All the sockets **72** are preferably arranged in the same plane. All the sockets **72** are preferably oriented in the same direction. The sockets **72** are preferably spaced away from each other, and aligned in several rows **73** and columns **74**, for forming a grid of sockets **72**. The rows **73** are perpendicular to the columns **74**. The rows **73** and/or the columns **74** are preferably evenly spaced.
[0077] Each socket **72** is configured to receive and hold one respective consumable article **1**. Thus, each socket **72** has a shape complementary to the shape of the consumable article **1** to be received therein. Thus, the packaging **70** may receive as many consumable articles **1** as there are sockets **72**.

When the consumable article **1** is received in one of the sockets **72**, the axis X**10** is preferably perpendicular to the plane of the flat-shaped holder **71**. When the consumable article **1** is received in one of the sockets **72**, one longitudinal end of the article **1** protrudes outside from the socket **72**, and another longitudinal end of the article **1** is contained within the socket **72** for the article **1** to be held by the socket **72**.

[0078] As the articles **1** partially protrude from the sockets **72**, they may conveniently be grabbed by the grabber **41**, as shown in FIG. **5**. To that end, the user positions the second part **40** over the desired article **1** held by the holder **71**, and deforms the grabber **41** to the open configuration for grabbing said article **1** by the protruding longitudinal end of said article. Once the grabbed article **1** is received within the grabber **41**, the user deforms the grabber **41** to the holding configuration so that the article **1** is held by the grabber **41**. The user may then move the part **40** away from the holder **71** so that the article **1** held by the grabber **41** is extracted from the socket **72**.

[0079] When one socket **72** is free, the user may release a consumable article **1** into said socket **72**, for example an exhausted consumable article **1** after the vaping session. To that end, the user positions the part **40** holding the article **1**, so as to insert article **1** into the available socket **72**. Once the article **1** is positioned in the socket **72**, the user deforms the grabber to the open configuration so that the grabber **41** releases the article **1** into the socket **72**. The user may then move part **40** away from the socket **72** and lastly authorize the grabber **41** to be deformed back to its rest configuration.

Claims

1. An aerosol generating device, configured to operate with a consumable article and comprising: a first part defining a cavity configured to receive the consumable article and to heat the consumable article during a vaping session, the consumable article thereby generating an aerosol; and a second part separable from the first part and comprising a grabber movable between: an open configuration, for the grabber to grab the consumable article, when the second part is separated from the first part, and a holding configuration, for the grabber to hold the consumable article, such that the consumable article is inserted into the cavity, when the first part and the second part are assembled.

2. The aerosol generating device according to claim 1, wherein the grabber is deformable between the open configuration and the holding configuration.

3. The aerosol generating device according to claim 1, wherein the second part comprises a mouthpiece configured to deliver the aerosol to a user.

4. The aerosol generating device according to claim 1, wherein the second part comprises an external surface and the grabber is configured to be moved to the open configuration by pinching of the external surface.

5. The aerosol generating device according to claim 4, wherein the external surface defines two opposite pinching zones, adapted to be pinched by a user's fingers to move the grabber to the open configuration.

6. The aerosol generating device according to claim 1, wherein the grabber forms a clip for grabbing the consumable article when in the open configuration and for holding the consumable article when in the holding configuration, the clip comprising axial legs configured to extend along opposite sides of the consumable article, for holding the consumable article when the grabber is in the holding configuration.

7. The aerosol generating device according to claim 6, wherein the axial legs are radially moved away from each other when the grabber is moved from the holding configuration to the open configuration, for enabling grabbing of the consumable article into the grabber.

8. The aerosol generating device according to claim 1, wherein the grabber is configured to elastically return to the holding configuration when in the open configuration.

9. The aerosol generating device according to claim 1, further comprising an abutment surface, preventing the grabber from being moved to the open configuration when the first part and the second part are assembled.

10. The aerosol generating device according to claim 1, wherein the first part comprises a heating element configured to heat the consumable article when the consumable article is received in the cavity.

11. The aerosol generating device according to claim 10, wherein the heating element is configured to surround and/or to penetrate the consumable article when the consumable article is received in the cavity.

12. An aerosol generating assembly, comprising the aerosol generating device according to claim 1 and a consumable article, the consumable article comprising a porous element storing a liquid that is able to generate an aerosol when heated in the cavity.

13. The aerosol generating assembly according to claim 12, wherein the consumable article is a single-session consumable article.

14. A packaging for a plurality of consumable articles, the packaging comprising a holder and defining a plurality of sockets formed in the holder, wherein each socket is respectively configured to receive one of the consumable articles, wherein one of the consumable articles is configured to protrude from the holder when received in one of the plurality of sockets.

15. The packaging according to claim 14, wherein the holder is flat-shaped and the plurality of sockets are arranged in rows and/or columns.