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(54) ARTICLE FOR FORMING AN AEROSOL

ARTIKEL ZUR FORMUNG EINES AEROSOLS

ARTICLE PERMETTANT DE FORMER UN AÉROSOL

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Description

[0001] This invention relates generally to an article for forming an aerosol and to a method of manufacture thereof.

[0002] Devices for generating aerosols which heat rather than combust an aerosol-forming substrate have previously been proposed in the art. For example, heated smoking devices in which tobacco is heated rather than combusted, have been proposed. One aim of such smoking devices is to reduce the generation of unwanted and harmful smoke constituents of the type produced by the combustion and pyrolytic degradation of tobacco in conventional cigarettes. These heated smoking devices are commonly known as 'heat not burn' devices.

[0003] Heated smoking devices of the above-described type commonly comprise a heating chamber, provided with, e.g. defined by, heating surfaces, into which an article for forming an aerosol is inserted, prior to use. The article for forming an aerosol typically contains an aerosol-forming substrate which is subsequently heated by a heater of the device to generate an aerosol. In this way, when the aerosol-forming substrate contained in an article has been exhausted the article can be replaced, with the heated smoking device thereby constituting a reusable device whilst the article comprises a 'consumable' product. The articles for forming an aerosol are normally shaped and sized to mimic conventional cigarettes. Accordingly, the articles, and the heating chamber in the heated smoking device into which they are inserted or insertable, have a generally cylindrical shape. Typically, the diameter of the articles is from 5 to 10 mm, say about 7.2 mm.

[0004] Articles for forming an aerosol of the above-described type typically have a wrapper or carrier layer within which the aerosol-forming substrate and other component parts are retained. The aerosol-forming substrate may have the form of sheet or leaf tobacco, for example crimped and/or wound into a plug shape. The aerosol-forming substrate is typically formed into a desired shape (for example a plug shape), combined with other component parts of an article for forming an aerosol, and then the wrapper or carrier layer is wrapped thereabout. The other component parts of the article may comprise a filter material, which may be provided at one or both of the ends of the article, serving as a plug to retain the aerosol-forming substrate within the article and, also, to filter aerosol generated by the heated smoking device, in use. Additionally, an aerosol-cooling element (which may be formed from a gathered sheet of polylactic acid, for example) may be located within the article, between the aerosol-forming substrate and the filter at one end of the article. A support element (for example formed from a hollow acetate tube) may additionally be positioned between the aerosol-forming substrate and the aerosol-cooling element.

[0005] EP0405190 discloses an extruded cigarette having a fuel element and a physically separate aerosol

generating means which is capable of producing quantities of aerosol.

[0006] WO2016/005602 discloses an electrically operated aerosol-generating system comprising an aerosol-generating device, and first and second removable aerosol-forming cartridges each comprising a resistive heater. The first removable aerosol-forming cartridge comprises a first aerosol-forming substrate requiring a first heating profile and the second removable aerosol-forming cartridge comprises a second aerosol-forming substrate requiring a second heating profile.

[0007] US2016/338412 discloses portable devices for generating a low-temperature inhalable vapor having an elongated tubular body containing a vaporization chamber and a battery-powered heater, a removable mouthpiece covering the vaporization chamber, a display configured to indicate the temperature of the vaporization chamber; a microcontroller configured to regulate the temperature of the vaporization chamber, and a control to select from among a variety of temperature settings.

[0008] In use, a user inserts an article between the heating surfaces of the heating chamber of a heated smoking device. The user then draws air through a free end of the article (said free end comprising filter material). The heater within the heated smoking device is activated to transfer thermal energy from the heating surfaces to the article for forming an aerosol via one or more of conduction, convection and radiation. In this way, volatile compounds are released from the aerosol-forming substrate. Air is drawn into the heated smoking device by the user drawing on the article for forming an aerosol. The air flows through at least part of the device and then into and along the length of the article, passing through the aerosol-forming substrate and drawing released volatile compounds therefrom along with it. The air flow and volatile compound mixture then passes through the cooling segment, where the volatile compounds cool and condense into an aerosol. This aerosol then passes through the filter material before being drawn into the lungs of the user. The wrapper or carrier layer acts as a baffle during this process and serves to direct the air flow causing it to flow through and along the article to the user.

[0009] Activation of the heater may be triggered by a puff sensor, for example, which may react to air flow thereby or therethrough exceeding a pre-set threshold level. As will be appreciated, using such a trigger mechanism, the user of the device begins to draw air through the device prior to heating and hence release of volatile compounds. Accordingly, there is a delay between a user beginning to draw on the device and the generation of aerosols thereby (and hence on the passage of generated aerosols reaching the user).

[0010] Devices for generating an aerosol of the above-described type are typically mobile and are generally intended to be held between the fingers of one hand. A user of such a device may carry the device around with them, from location to location. For example, a user may store the device, between uses, in a pocket of an article

of clothing. Replacement articles for forming an aerosol are typically stored in a pack or case, which the user must remember to also carry with them. The articles, which are typically cigarette shaped (as explained above) are generally stored in a pack or case having a similar shape to that of a cigarette packet. The pack or case of articles for forming an aerosol may also be stored in a pocket of an article of clothing when the device is not in use. Storage of both a device for generating an aerosol and one or more packs or cases of articles for forming an aerosol may prove challenging depending on the size of a user's pockets. In any event, such storage may be unsightly and/or uncomfortable. Additionally, when the or each pack or case is partially emptied (as articles for forming an aerosol are used and disposed of) the remaining articles tend to move within the pack or case and generate an undesirable noise when a user is moving about.

[0011] Heating an aerosol-forming substrate, rather than combusting it, requires that the aerosol-forming substrate is heated to a relatively reduced temperature. Accordingly, a relatively reduced quantity of thermal energy need be transferred to the aerosol-forming substrate. The energy saved beneficially reduces the expense of operating the heated smoking device and/or increases the useful number of operations the device can perform before exhausting its store of energy. It would be beneficial, however, to yet further reduce the quantity of thermal energy required to volatilize compounds from an article for forming an aerosol.

[0012] It would be desirable to provide an article for forming an aerosol which is improved over prior art articles for forming an aerosol. It would be desirable to provide an article for forming an aerosol which mitigates one or more of the above-identified issues. It would be desirable to provide an article for forming an aerosol which facilitates relatively more efficient and/or rapid transfer of thermal energy to an aerosol-forming substrate from a device for generating an aerosol, in use, than is achieved with prior art articles. It would be desirable to provide an article for forming an aerosol which requires a relatively reduced quantity of thermal energy when heated in the heating chamber of a device for generating an aerosol. It would be desirable to provide an article for forming an aerosol which can be more easily and/or quietly transported by a user of a device for generating an aerosol than is the case with prior art articles for forming an aerosol. It would also be desirable to provide a method of manufacturing an article for forming an aerosol with one or more of the above-identified advantages.

[0013] According to an aspect of the invention, there is provided a method for or of manufacturing an article for forming an aerosol, the method comprising the steps of:

- a) providing a cover layer which comprises, defines or provides a mould surface for defining the periphery of an article for forming an aerosol;
- b) depositing a substance which is at least partially

fluid and comprises aerosol-forming substrate into the mould surface; and

c) causing or allowing the substance to at least partially solidify thereby to provide an article for forming an aerosol having a periphery formed from the cover layer, wherein the mould surface circumscribes the moulded aerosol-forming substrate.

[0014] Advantageously, the mould surface provides a barrier which mitigates contact between the aerosol-forming substrate and a user handling the article, for example when inserting or removing the article from a device for generating an aerosol. Moreover, the substance comprising aerosol-forming substrate has a relatively more intimate contact with the mould surface than is the case between aerosol-forming substrates and cover layers or wrappers of prior art articles for forming an aerosol. Accordingly, heat transfer to the aerosol-forming substrate from peripheral heating surfaces of the heating chamber of a device for generating an aerosol is relatively more efficient than is the case with prior art articles for forming an aerosol. Without wishing to be bound by any particular theory it is believed that prior art articles for forming an aerosol may comprise an at least partial air barrier between a wrapper and enclosed aerosol-forming substrate. This air barrier provides a layer of insulation between the aerosol-forming substrate and a source of heat external to the article. Additionally, conduction of heat between the wrapper and the aerosol-forming substrate is limited or prevented in such prior art articles for forming an aerosol. Articles for forming an aerosol according to the invention, however, due to the relatively more intimate contact between the mould surface and the substance comprising aerosol-forming substrate mitigate the above-explained issues and, accordingly, provide more efficient heating of the aerosol-forming substrate, in use. Relatively less thermal energy is therefore required to heat the aerosol-forming substrate to the required temperature to release volatile compounds therefrom. Hence, a power source of the device for generating an aerosol, in which the article for forming an aerosol is heated, may be used for a relatively increased number of heating operations (for a given quantity of released volatile compounds). The device is therefore more useful to a user thereof, and requires less frequent recharging (if such is possible) or replacement (if necessary), with attendant cost savings and improvements in convenience for the user.

[0015] As used herein, the phrase 'aerosol-forming substrate' is used to describe a substrate capable of releasing upon heating volatile compounds, which can form an aerosol. The aerosol generated from aerosol-forming substrates described herein may be visible or invisible to the human eye. The aerosol-forming substrate may comprise a solid, a fluid or a mixture of solid and fluid substrate. Where the aerosol-forming substrate is a fluid it is advantageously retained within a matrix and/or by a cover layer, at least prior to receipt of the aerosol-forming

substrate in the heating chamber.

[0016] As used herein, the term 'aerosol' is used to describe a suspension of relatively small particles in a fluid medium.

[0017] As used herein, the phrase 'mould surface' is intended to mean a surface for moulding (e.g. in step b)) an at least partially fluid thereagainst.

[0018] As used herein, the term 'periphery' is intended to mean the outer limits of the volume of the article for forming an aerosol.

[0019] In some embodiments, depositing a substance into the mould surface may comprise pouring, injecting or extruding the substance or otherwise causing the substance to flow. The substance may be deposited in a first or deposition direction (for example in a single direction) onto the mould surface (for example relative to the mould surface). In some embodiments, in a cross-section transverse to the first or deposition direction, the mould surface may circumscribe substantially all of or the entire periphery of a formed article for forming an aerosol.

[0020] In some embodiments, causing or allowing the substance to at least partially solidify may comprise at least partially cooling the substance. Cooling the substance may comprise directing or allowing a flow of fluid (e.g. gas or liquid) near to and/or against the substance, for example where the flow of fluid has a relatively lower temperature than does the substance.

[0021] In some embodiments, the method may comprise a step d) of foaming the substance, for example to form an open celled or closed celled foam. Step d) may occur subsequent to or prior to step b).

[0022] In some embodiments, the method may comprise a step e) of reticulating the foam. Step e) may occur prior to or subsequent to step b). Reticulating the foam may comprise addition of heat and/or one or more chemical substance to the foam.

[0023] In some embodiments, the method may comprise a step f) of adding to the mould surface and/or the substance one or more of a flavourant, an aerosol former and nicotine. Adding may comprise contacting the mould surface and/or the substance with one or more of the flavourant, the aerosol former and nicotine. Contacting may comprise spraying, covering and/or dipping. Adding may comprise impregnating the mould surface and/or the substance with one or more of the flavourant, the aerosol former and nicotine. In embodiments, step f) may comprises applying or adding the or each of the one or more of the flavourant, aerosol former and nicotine to the mould surface prior to, subsequent to or simultaneously with step b).

[0024] In some embodiments, the method may comprise a step g) of forming a line of weakness in the substance and/or mould surface, for example to thereby at least partially define first and second portions of the substance.

[0025] In some embodiments, the method may comprise a step h) of separating a or the first portion of the substance from a or the second portion of the substance,

for example with a separator. The mould surface may comprise the separator. For example, the mould surface may be integrally formed with the separator. Alternatively, the separator may be positioned in or on the mould surface.

[0026] In some embodiments, the substance may comprise only aerosol-forming substrate. Alternatively, the substance may comprise aerosol-forming substrate and a further material, for example a carrier material. The carrier material and/or the aerosol-forming substrate may comprise the foam (where formed). Where carrier material is foamed to form a foam the aerosol-forming substrate may be provided in or on or embedded in or on the foam of carrier material. The substance may comprise tobacco, for example reconstituted tobacco (e.g. stalks and the like). The substance may comprise nicotine.

[0027] According to an aspect of the invention, there is provided an article for forming an aerosol, the article comprising a peripheral mould surface circumscribing a moulded aerosol-forming substrate, the article being insertable, in use, into a heating chamber of a device for generating an aerosol.

[0028] In some embodiments, in cross-section the peripheral mould surface may circumscribe substantially all of or the entire periphery of the article.

[0029] In some embodiments, the aerosol-forming substrate may comprise first and second portions, for example at least partially defined by a frangible portion of the aerosol-forming substrate and/or the peripheral mould surface.

[0030] The article comprises a cover layer, for example which may comprise or define or provide the peripheral mould surface (e.g. on an inwardly facing surface thereof). The cover layer may be formed from a polymer such as a food grade plastic and/or a paper such as filter paper. Additionally or alternatively, the cover layer may comprise any other suitable material, for example abaca fibres and the like. The cover layer may comprise cellulose. The cover layer may comprise and/or be at least partially formed from tobacco, for example reconstituted tobacco. The cover layer may comprise plural apertures through its thickness, for example where the plural apertures may be arranged uniformly or randomly. The cover layer may comprise a net or mesh or weave. Alternatively, the cover layer may comprise a solid surface, for example having a region (e.g. a major region) absent plural apertures through its thickness. The cover layer may provide an outer layer, e.g. of the article. Alternatively, the article may comprise a further layer over and/or about the cover layer. The further layer (where provided) may comprise a removable or temporary layer, e.g. a layer intended to be removed prior to use of the article. The further layer may be wrapped or otherwise secured over and/or about the cover layer, e.g. subsequent to step c) of a method of manufacturing an article for forming an aerosol.

[0031] Preferably, the aerosol-forming substrate comprises nicotine. The aerosol-forming substrate may com-

prise tobacco. Alternatively or in addition, the aerosol-forming substrate may comprise a non-tobacco containing aerosol-forming material.

[0032] If the aerosol-forming substrate is a solid aerosol-forming substrate, the solid aerosol-forming substrate may comprise, for example, one or more of: powder, granules, pellets, shreds, strands, strips or sheets (e.g. containing one or more of: herb leaf, tobacco leaf, tobacco ribs, expanded tobacco and homogenised tobacco).

[0033] Optionally, the solid aerosol-forming substrate may contain tobacco or non-tobacco volatile flavour compounds, which are released upon heating of the solid aerosol-forming substrate.

[0034] If the aerosol-forming substrate is in the form of a fluid, for example a liquid or a gas, the aerosol-forming substrate may contain tobacco or non-tobacco volatile flavour compounds, which are released upon heating of the fluid aerosol-forming substrate.

[0035] Optionally, the solid or fluid aerosol-forming substrate may be provided on or embedded in a carrier material, for example a thermally stable carrier material. The carrier material may take the form of a foam, e.g. an open or closed cell foam. The solid or fluid aerosol-forming substrate may be deposited throughout the carrier material, e.g. throughout the volume thereof. Additionally or alternatively, the solid or fluid aerosol-forming substrate may be deposited on the surface of the carrier material in the form of, for example, a sheet, foam, gel or slurry. The solid or fluid aerosol-forming substrate may be deposited on the entire surface of the carrier material, or alternatively, may be deposited in a pattern in order to provide a non-uniform flavour delivery during use.

[0036] In some embodiments, the aerosol-forming substrate may comprise a foam. The foam may be open celled or closed celled. The foam may be a reticulated open celled foam. The foam may be at least partially formed from tobacco, for example from reconstituted tobacco (e.g. stems and the like).

[0037] The article for forming an aerosol may comprise a volatile flavour-generating component. The aerosol forming substrate (for example and/or the carrier material, where provided) may comprise the volatile flavour-generating component. The volatile flavour-generating component may be at least partially retained in and/or impregnated into and/or located on the surface of the aerosol-forming substrate and/or a carrier material (if such is provided) and/or the cover layer (where provided) and/or the peripheral mould surface thereof.

[0038] As used herein the term 'volatile flavour-generating component' is used to describe any volatile component that is added to an aerosol-forming substrate (for example and/or carrier material, where provided) in order to provide a flavourant.

[0039] Suitable flavourants include, but are not limited to, materials that contain natural or synthetic menthol, peppermint, spearmint, coffee, tea, spices (such as cinnamon, clove and ginger), cocoa, vanilla, fruit flavours,

chocolate, eucalyptus, geranium, eugenol, agave, juniper, anethole, linalool, and the like.

[0040] As used herein, the term 'menthol' is used to describe the compound 2-isopropyl-5-methylcyclohexanol in any of its isomeric forms.

[0041] Menthol may be used in solid or liquid form. In solid form, menthol may be provided as particles or granules. The term 'solid menthol particles' may be used to describe any granular or particulate solid material comprising at least approximately 80% menthol by weight.

[0042] Preferably, 1.5mg or more of the volatile flavour-generating component is included in the aerosol-forming substrate.

[0043] The volatile flavour-generating component (where provided) may be in the form of a liquid or a solid. The volatile flavour-generating component may be coupled to, or otherwise associated with, a support element. The support element may comprise any suitable substrate or support for locating, holding, or retaining the volatile flavour-generating component. For example, the support element may comprise a fibrous support element, which may be saturated or saturatable with fluid, for example a liquid.

[0044] In embodiments, the volatile flavour-generating component may have any suitable structure in which a structural material releasably encloses a flavourant or flavourants. For example, in some preferred embodiments, the volatile flavour-generating component comprises a matrix structure defining a plurality of domains, the flavourant being trapped within the domains until released, for example, when the aerosol-forming substrate is subject to external force. Alternatively, the volatile flavour-generating component may comprise a capsule. Preferably, the capsule comprises an outer shell and an inner core containing the flavourant. Preferably, the outer shell is sealed before the application of an external force, but is frangible or breakable to allow the flavourant to be released when the external force is applied. The capsule may be formed in a variety of physical formations including, but not limited to, a single-part capsule, a multi-part capsule, a single-walled capsule, a multi-walled capsule, a large capsule, and a small capsule.

[0045] If the volatile flavour-generating component comprises a matrix structure defining a plurality of domains enclosing the flavourant, the flavourant delivery member may release the flavourant steadily when the aerosol-forming substrate is subject to external force. Alternatively, if the volatile flavour-generating component is a capsule arranged to rupture or burst to release the flavourant when the article for forming an aerosol is subject to external force (for example, but not limited to, if the capsule comprises an outer shell and an inner core), the capsule may have any desired burst strength. The burst strength is the force (exerted on the capsule from the outside of the aerosol-forming substrate) at which the capsule will burst. The burst strength may be a peak in the capsule's force versus compression curve.

[0046] The volatile flavour-generating component may

be configured to release the flavourant in response to an activation mechanism. Such an activation mechanism may include the application of a force to the volatile flavour-generating component, a change in temperature in the volatile flavour-generating component, a chemical reaction, or any combination thereof.

[0047] The method may comprise a step of adding the volatile flavour-generating component to the substance comprising the aerosol-forming substrate, and/or to the foam (reticulated or otherwise) thereof. Additionally or alternatively, the method may comprise a step of adding the volatile flavour generating component to the cover layer (where provided) and/or to the mould surface thereof.

[0048] Preferably, the aerosol-forming substrate comprises an aerosol former.

[0049] As used herein, the term 'aerosol former' is used to describe any suitable known compound or mixture of compounds that, in use, facilitates formation of an aerosol and that is substantially resistant to thermal degradation at the operating temperature of the aerosol-forming substrate. Suitable aerosol formers are known in the art and include, but are not limited to: polyhydric alcohols, such as propylene glycol, triethylene glycol, 1,3-butanediol and glycerine; esters of polyhydric alcohols, such as glycerol mono-, di- or triacetate; and aliphatic esters of mono-, di- or polycarboxylic acids, such as dimethyl dodecanedioate and dimethyl tetradecanedioate

[0050] Preferred aerosol formers are polyhydric alcohols or mixtures thereof, such as propylene glycol, triethylene glycol, 1,3-butanediol and, most preferred, glycerine.

[0051] The aerosol-forming substrate may comprise a single aerosol former. Alternatively, the aerosol-forming substrate may comprise a combination of two or more aerosol formers.

[0052] Preferably, the aerosol-forming substrate has an aerosol former content of greater than 5% on a dry weight basis.

[0053] The aerosol aerosol-forming substrate may have an aerosol former content of between approximately 5% and approximately 30% on a dry weight basis.

[0054] In a preferred embodiment, the aerosol-forming substrate has an aerosol former content of approximately 20% on a dry weight basis.

[0055] There is also disclosed an article for forming an aerosol, the article comprising a peripheral surface circumscribing an aerosol-forming substrate, the article being insertable, in use, into a heating chamber of a device for generating an aerosol, wherein the aerosol-forming substrate comprises first and second portions at least partially defined by a frangible portion of the aerosol-forming substrate and/or of the peripheral surface.

[0056] In some embodiments, the frangible portion may comprise a separator and/or line of weakness in the aerosol-forming substrate and/or the peripheral surface between the first and second portions.

[0057] Beneficially, provision of the frangible portion

(e.g. the separator and/or line of weakness) allows the aerosol-forming substrate to be separated by a user into the first and second portions and for each to therefore be used, in a device for generating an aerosol, separately. In this way, the article can provide multiple aerosol-forming cycles in the device for generating an aerosol. Advantageously, a relatively reduced number of articles need be carried by a user of such a device, compared with prior art articles for forming an aerosol. Furthermore, carrying of articles for forming an aerosol according to the invention is made relatively easier and less intrusive than is the case with prior art articles for forming an aerosol. In particular, articles for forming an aerosol according to the invention occupy a relatively reduced volume than do the plural prior art articles required to provide the same number of aerosol-forming cycles. Further, articles for forming an aerosol according to the invention may generate less noise during transport thereof than do plural prior art articles retained in a case or pack.

[0058] In some embodiments, the peripheral surface may comprise a peripheral mould surface, for example circumscribing a moulded aerosol-forming substrate. The article may comprise a cover layer which may comprise or define or be the peripheral surface (e.g. the peripheral mould surface). The cover layer may be (or comprise attributes) as described elsewhere herein.

[0059] In some embodiments, the first and second portions may have substantially similar shapes and/or volumes.

[0060] In some embodiments, the article and/or the aerosol-forming substrate and/or the first portion may have a substantially cylindrical shape. The article and/or the aerosol-forming substrate and/or the first portion may have a diameter (for example in cross-section) and a length (e.g. a longitudinal dimension).

[0061] The article for forming an aerosol and/or the aerosol-forming substrate and/or the first portion may have a diameter of at least 5 mm, for example a diameter of between approximately 5 mm and approximately 12 mm, say of between approximately 5 mm and approximately 10 mm or of between approximately 6 mm and approximately 8 mm. In an embodiment, the article for forming an aerosol and/or the aerosol-forming substrate and/or the first portion may have an external diameter of 7.2 mm +/- 10%.

[0062] The article for forming an aerosol and/or the aerosol-forming substrate and/or the first portion may have a length of between approximately 30 mm and approximately 100 mm, say approximately 45 mm. In embodiments, the article for forming an aerosol and/or the aerosol-forming substrate and/or the first portion may have a length of between approximately 70 mm and 120 mm.

[0063] As used herein, the term 'diameter' is used to describe the maximum dimension in the transverse direction of the article for forming an aerosol. As used herein, the term 'length' is used to describe the maximum dimension in the longitudinal direction of the article for forming an aerosol. As used herein, the term 'longitudinal'

is used to describe the direction between ends (e.g. upstream and downstream ends) of the article for forming an aerosol and the term 'transverse' is used to describe the direction perpendicular to the longitudinal direction. As used herein, the terms 'upstream' and 'downstream' are used to describe the relative positions of elements, or portions of elements, of the article for forming an aerosol in relation to the direction in which a user draws fluid through the article during use thereof.

[0064] In some embodiments, the article and/or the aerosol-forming substrate and/or first portion may have a first major surface which is substantially flat. The article and/or the aerosol-forming substrate and/or the first portion may have a second major surface which is substantially flat. The first and second major surfaces may be substantially parallel to one another. The article and/or the aerosol-forming substrate and/or the first portion may have a substantially parallelepiped shape. The article and/or the aerosol-forming substrate and/or the first portion may have a width, a length and a thickness, for example where the width, length and thickness are measured in a direction perpendicular to one another. The thickness may comprise the distance between the first and second major surfaces, where provided. The width and/or length of the article and/or the aerosol-forming substrate and/or the first portion may have a ratio to the thickness of at least 2:1, for example at least 3:1, 4:1, 5:1, 6:1, 7:1, 8:1, 9:1 or 10:1. The width and/or the length of the article and/or the aerosol-forming substrate and/or the first portion may be between approximately 2 mm and 120 mm, for example between approximately 3, 4, 5, 6, 7, 8, 9, 10 and 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120 mm. The thickness of the article and/or the aerosol-forming substrate and/or the first portion may be between approximately 0.5 mm and 15 mm, for example between approximately 0.5 or 1.0 mm and 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0 or 12.0 mm.

[0065] Where a line of weakness is referred to in the following description it will be appreciated that any or all features thereof may apply equally to a frangible portion. The line of weakness (where provided) may comprise a continuous line or an interrupted line. The line of weakness may be substantially straight. Alternatively, the line of weakness may be at least partially curved. Where the article and/or first portion and/or aerosol-forming substrate has a thickness or diameter the line of weakness may extend only partially through the thickness or diameter. Alternatively, the line of weakness may extend through the thickness or diameter. Where the article and/or first portion and/or aerosol-forming substrate has a width the line of weakness may extend across only part of the width. Alternatively, the line of weakness may extend across the entire width.

[0066] In some embodiments, the line of weakness may comprise plural lines of weakness (e.g. first and second lines of weakness). The first line of weakness may

be spaced from the second line of weakness. The first line of weakness may be substantially parallel or perpendicular to the second line of weakness. The first line of weakness may be spaced from the second line of weakness and/or from an edge of the article by a distance substantially equal to a dimension of the first and/or second portion (for example a thickness, width or length thereof). Where the line of weakness comprises plural lines of weakness, one line of weakness may comprise a continuous line and another of the plural lines of weakness may comprise an interrupted line. Additionally or alternatively, one or more of the plural lines of weakness may have different properties (for example in respect of extending through the article thickness or diameter or across the width) than does one or more of the other of the plural lines of weakness. Additionally or alternatively, one or more of the plural lines of weakness may have a different tear strength than does one or more of the other of the plural lines of weakness.

[0067] The separator (where provided) may comprise a part or portion of the peripheral surface, for example may be formed integrally therewith or attached thereto. Alternatively, the separator may comprise a discrete component, e.g. discrete from the peripheral surface. Where the separator may be configured or arranged to completely separate the first portion from the second portion. Alternatively, the separator may be configured or arranged to only partially separate the first portion from the second portion (e.g. such that the first and second portions are at least partially attached or conjoined). The separator may comprise a line of weakness, for example a line of weakness may be provided in or through at least part of the separator.

[0068] The separator may be formed from one or more thermally stable materials, e.g. which may experience chemical change and/or phase change at a temperature above the temperature at which volatile compounds are released from the aerosol-forming substrate. The separator may comprise a polymer and/or a wood material or the like.

[0069] Alternatively, the separator may be formed from a material selected to experience a chemical change and/or a phase change at a temperature at or below the temperature at which volatile compounds are released from the aerosol-forming substrate. In embodiments, the separator may comprise a volatile flavour-generating component, for example an additive, e.g. a flavourant.

[0070] There is also disclosed a method of or for manufacturing an article for forming an aerosol, the method comprising the steps of:

- a) providing a surface for defining the periphery of an article for forming an aerosol;
- b) providing an aerosol-forming substrate;
- c) forming a frangible portion in the aerosol-forming substrate and/or the surface to thereby at least par-

tially define first and second portions of the aerosol-forming substrate; and

d) arranging the surface and aerosol-forming substrate such that the surface circumscribes a periphery of the aerosol-forming substrate.

[0071] Step c) may comprise forming a line of weakness in the aerosol-forming substrate to thereby at least partially define first and second portions thereof; and/or at least partially separating the aerosol-forming substrate into first and second portions (e.g. the first and second portions). In some embodiments, step c) may occur prior to step b), simultaneously thereto or subsequent thereto. Forming a line of weakness may comprise pushing a forming tool into the aerosol-forming substrate to locally deform and/or cut into it, for example pushing the forming tool against the surface for defining the periphery of the article to thereby locally deform and/or cut into the aerosol-forming substrate. Step c) may comprise pushing forming tools against opposed sides of the aerosol-forming substrate and/or the surface for defining the periphery of the article, e.g. at least partially simultaneously or sequentially.

[0072] The aerosol-forming substrate may be formed by extrusion or moulding. Where the aerosol-forming substrate is formed by moulding, this moulding may occur at least partially in the surface for defining the periphery of the article (e.g. where the surface may comprise a mould surface). Where the aerosol-forming substrate is formed by moulding the line of weakness may be at least partially formed during moulding of the aerosol-forming substrate.

[0073] Where the aerosol-forming substrate is at least partially separated into first and second portions by a separator, this may comprise providing a separator between the first and second portions. The separator may be pushed into the aerosol-forming substrate. Alternatively, the aerosol-forming substrate may be at least partially formed about the separator, e.g. moulded thereabout.

[0074] Step d) of arranging the surface and aerosol-forming substrate such that the surface circumscribes a periphery of the aerosol-forming substrate may comprise wrapping the aerosol-forming substrate with the surface. Additionally or alternatively, step d) may comprise moulding the aerosol-forming substrate in the surface, for example depositing at least partially fluid aerosol-forming substrate in the surface and allowing or causing the aerosol-forming substrate to at least partially solidify.

[0075] There is further disclosed a method of using an article for forming an aerosol, the method comprising: providing a device for generating an aerosol, the device comprising a heating chamber; providing an article for forming an aerosol comprising aerosol-forming substrate circumscribed by a peripheral surface or mould surface; inserting the article for forming an aerosol into the heating chamber of the device for generating an aerosol; and

generating an aerosol from the aerosol-forming substrate of the article for forming an aerosol.

[0076] The article for forming an aerosol may comprise a cover layer, for example which may comprise or define the peripheral surface or mould surface. The method of use may comprise removing the cover layer prior to insertion of the article for forming an aerosol into the heating chamber of the device for generating an aerosol. Alternatively, the article for forming an aerosol may be inserted into the heating chamber of the device for generating an aerosol with the cover layer still providing a surface or mould surface circumscribing the periphery of the aerosol-forming substrate.

[0077] All scientific and technical terms used herein have meanings commonly used in the art unless otherwise specified. The definitions provided herein are to facilitate understanding of certain terms used frequently herein.

[0078] Throughout the description and claims of this specification, the words "comprise" and "comprising" and variations of them mean "including but not limited to", and they are not intended to (and do not) exclude other moieties, additives, components, integers or steps. Throughout the description and claims of this specification, the singular encompasses the plural, and vice versa, unless the context otherwise requires. In particular, where the indefinite article is used, the specification is to be understood as contemplating plurality as well as singularity, unless the context requires otherwise.

[0079] The invention will now be further described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a cross-sectional schematic view of an article for forming an aerosol according to an embodiment of the invention;

Figure 2 is a flow diagram illustrating a method of manufacturing the article for forming an aerosol shown in Figure 1;

Figure 3 is a perspective schematic view of an article for forming an aerosol according to a further embodiment of the invention;

Figure 4 is a cross-sectional schematic view taken along the line A-A in Figure 3; and

Figure 5 is a flow diagram illustrating a method of manufacturing the article for forming an aerosol shown in Figure 3.

[0080] Referring now to Figure 1, there is shown an article 1 for forming an aerosol according to an embodiment of the invention. The article 1 comprises a peripheral cover layer 2 comprising or defining a mould surface 20 which circumscribes a moulded aerosol-forming substrate 3.

[0081] The cover layer 2 is formed from paper and has the form of a netting or weave, with plural apertures through its thickness, in this embodiment. In embodiments, however, the cover layer 2 may comprise a solid

surface absent or provided with apertures and/or may be formed from any suitable material, for example polymer material and/or paper, etc.

[0082] The aerosol-forming substrate 3 comprises reticulated open-celled foam of reconstituted tobacco (e.g. stems and the like), in this embodiment. In embodiments, however, the aerosol-forming substrate 3 may be supported or carried by a carrier substance which is itself in the form of a foam (e.g. an open-celled or reticulated open-celled foam). Where a carrier substance is provided, the aerosol-forming substrate 3 may be in any suitable form for being retained by the carrier substance. For example, the aerosol-forming substrate 3 may be in the form of a solid (e.g. a powder) or a fluid.

[0083] The aerosol-forming substrate 3 is impregnated with nicotine and glycerine, in this embodiment. In embodiments, however, where the aerosol-forming substrate 3 is carried in a carrier substance, the carrier substance may be impregnated with nicotine and/or glycerine. Additionally or alternatively, any suitable additive may be impregnated into the aerosol-forming substrate 3 (or carrier substance, where provided) in addition to or instead of the nicotine and glycerine. Suitable additives include, but are not limited to, tobacco and non-tobacco fibres, aerosol formers, humectants, plasticisers, volatile flavour-generating components, flavourants, fillers, aqueous and non-aqueous solvents and combinations thereof. In embodiments, the cover layer 2 may be impregnated with nicotine, glycerine and/or any other suitable additive, additionally or alternatively. In embodiments, nicotine, glycerine and/or any other suitable additive may be provided on the mould surface 20 of the cover layer 2, additionally or alternatively.

[0084] Referring now to Figure 2 there is shown a flow diagram illustrating a method of manufacturing the article for forming an aerosol shown in Figure 1.

[0085] The method comprises a first step S1 of providing a cover layer 2 comprising or defining a mould surface 20, which is shaped to define the periphery of an article 1 for forming an aerosol.

[0086] In a second step S2 a substance, e.g. an at least partially liquid substance, comprising aerosol-forming substrate is introduced onto the mould surface 20 of the cover layer 2. In embodiments, the aerosol-forming substrate comprises tobacco, for example reconstituted or waste tobacco products (such as stems and the like). The substance may be a slurry, which is formed in a conventional manner, as is well known to one skilled in the art.

[0087] The substance, e.g. slurry, is formed into a foam in a third step S3 via foaming with a gas (e.g. a gas blown into the substance and/or a gas generated within the substance) whilst the substance, e.g. slurry, is located on the mould surface 20, in this embodiment. In embodiments, however, the substance, e.g. slurry, may be foamed before it is introduced onto the mould surface 20 in second step S2.

[0088] The foamed material is reticulated in a fourth

step S4, which also occurs subsequent to introducing the substance, e.g. slurry, onto the mould surface 20, in this embodiment. In embodiments, however, the fourth step S3 of reticulation may occur prior to contacting the mould surface 20.

[0089] Nicotine and glycerine are provided on the mould surface 20 prior to introducing the substance, e.g. slurry, thereonto, in the second step S2. The nicotine and glycerine may be sprayed, rolled, dip-coated or otherwise deposited onto the mould surface 20. The nicotine and glycerine may be provided on the mould surface 20 simultaneously or sequentially. The nicotine and glycerine impregnate into the substance, e.g. slurry, when it is introduced onto the mould surface 20 and, consequently, into the foamed aerosol-forming substrate 3, in this embodiment. In embodiments, however, such impregnation may comprise providing the nicotine and/or glycerine directly into the substance, e.g. slurry, or the foamed material (e.g. via spraying or the like). In embodiments, the cover layer 2 may be formed from a material which is at least partially absorbent and may be configured to at least partially retain the nicotine and/or the glycerine (and/or any other suitable additive).

[0090] The reticulated foam aerosol-forming substrate is then cured or is otherwise dried or allowed to dry. In this way, an article 1 for forming an aerosol is formed.

[0091] Referring now to Figures 3 and 4, there is shown an article 11 for forming an aerosol according to a further embodiment of the invention, wherein like references preceded by a '1' refer to like features which will not be described herein further. The article 11 shown in Figures 3 and 4 differs from the article 1 shown in Figure 1 in that the cross-section has a different shape (the article 11 has a rectangular cross-sectional shape instead of the circular cross-sectional shape of the article 1) and that a line of weakness W (thereby providing a frangible portion) is provided in the aerosol-forming substrate 13.

[0092] The line of weakness W defines first and second portions 13a, 13b of the aerosol-forming substrate 13, as can be seen in particular in Figure 4. The first and second portions 13a, 13b have a generally similar shape and volume, in this embodiment. In embodiments, however, the first and second portions 13a, 13b may have different shapes and/or volumes.

[0093] The line of weakness W comprises a continuous and uninterrupted line which extends across a width w of the article 11 in this embodiment. The line of weakness W does not extend through the thickness t of the aerosol-forming substrate 13, in this embodiment, such that the first and second portions 13a, 13b remain partially joined to one another. In use, a user may preferentially separate the first and second portions 13a, 13b from one another at the line of weakness W. The first portion 13a of the aerosol-forming substrate 13 may then be used in a device for generating an aerosol (not shown) whilst the second portion 13b is retained for future use therein. A portion of the cover layer 12 extends into the line of weakness W, thereby forming a separator S.

[0094] The article 11 for forming an aerosol is formed by the method shown in Figure 5. In a first step S5 a cover layer 12 is provided. In a second step S6 an aerosol-forming substrate 13 is provided. The cover layer 12 is wrapped around (or otherwise disposed about) the aerosol-forming substrate 13 in a third step S7. A portion of the cover layer 12, in the shape and location of a desired line of weakness W, is then pressed into the aerosol-forming substrate 13 in a fourth step S8, using a pressing tool (not shown) shaped and sized to form the line of weakness W. The pressure acting against the aerosol-forming substrate 13 causes it to deform and form a line of weakness W. The portion of the cover layer 12 pressed into the aerosol-forming substrate remains in the line of weakness W in this embodiment, thereby forming a separator S which at least partially separates the first portion 13a from the second portion 13b of the aerosol-forming substrate 13. In embodiments, however, the cover layer 12 may be at least partially formed from a material which may at least partially retract from the line of weakness W after its formation (and thereby return to or toward its shape prior to application of pressure thereagainst).

[0095] In embodiments, the aerosol-forming substrate 13 may comprise more than one line of weakness W, for example two, three, four or more lines of weakness. In embodiments, one or more of the additional lines of weakness may be substantially parallel to or perpendicular to the first line of weakness W.

[0096] As will be appreciated, in embodiments the line of weakness W may extend across only a part of the width w of the article 11. Additionally or alternatively, the line of weakness W may not comprise a continuous line but may instead include one or more interruptions along its length. Where the line of weakness W extends only partly across the width w of the article 11 and/or comprises a non-continuous line thereacross, the line of weakness W may extend through the thickness t of the aerosol-forming substrate 13. Where the line of weakness W extends through the thickness t of the aerosol-forming substrate 13 the portion of the cover layer 12 extending into the line of weakness W may contact and/or be joined to the cover layer 12 on the obverse face of the aerosol-forming substrate 13. Such joining may be accomplished by adhesive bonding, one or more fixings and/or by thermally bonding the portion of the cover layer 12 within the line of weakness W to the cover layer 12 on the obverse face of the aerosol-forming substrate 13.

[0097] In embodiments, the line of weakness W may be formed by pressing the cover layer 12 into the aerosol-forming substrate 13 on opposite sides thereof, either simultaneously or sequentially.

[0098] While it is described that the line of weakness W is formed only by pressing the cover layer into the aerosol-forming substrate this need not be the case and, instead, the line of weakness may be at least partially formed prior to covering the aerosol-forming substrate 13 with the cover layer 12. In embodiments, the aerosol-

forming substrate 13 may be directly pressed so as to form the line of weakness W. In embodiments, the aerosol-forming substrate may be moulded into shape in a mould comprising a projection arranged to at least partially define the line of weakness W. In some embodiments the line of weakness W may be formed by piercing the cover layer 12 with one or more piercing edges.

[0099] In an alternative embodiment, the line of weakness W may extend across the width w and through the thickness t of the aerosol-forming substrate 13, thereby separating the first and second portions 13a, 13b from one another. The portion of the cover layer 12 in the line of weakness W may be at least partially joined or affixed to the cover layer 12 on the obverse face of the aerosol-forming substrate 13, where the first and second portions 13a, 13b are separate from one another. Where the cover layer 12 comprises such a joined portion between the first and second portions the joined portion of the cover layer 12 (comprising a separator) may be provided with a line of weakness. For example, one or more apertures may be provided through the joined portion of the cover layer. These apertures may be formed by a blade or otherwise sharp-edged tool.

[0100] The schematic drawings are not necessarily to scale and are presented for purposes of illustration and not limitation. The drawings depict one or more aspects described in this disclosure. However, it will be understood that other aspects not depicted in the drawings fall within the scope of this disclosure.

Claims

1. A method of manufacturing an article (1, 11) for forming an aerosol, the method comprising the steps of:
 - a) providing a cover layer (2, 12) which comprises, defines or provides a mould surface (20) for defining the periphery of an article (1, 11) for forming an aerosol;
 - b) depositing a substance which is at least partially fluid and comprises aerosol-forming substrate into the mould surface (20); and
 - c) causing or allowing the substance to at least partially solidify thereby to provide an article for forming an aerosol having a periphery formed from the cover layer, wherein the mould surface (20) circumscribes the moulded aerosol-forming substrate.
2. Method according to Claim 1, comprising a step d) of foaming the substance.
3. Method according to Claim 2, wherein step d) occurs subsequent to step b).
4. Method according to Claim 2 or 3, comprising a step e) of reticulating the foam.

5. Method according to Claim 4, wherein step e) occurs subsequent to step b).
6. Method according to any preceding Claim, comprising a step f) of adding to the mould surface (20) and/or the substance one or more of a volatile flavour-generating component, an aerosol former and nicotine.
7. Method according to Claim 6, wherein step f) comprises adding the or each of the one or more of the volatile flavour-generating component, aerosol former and nicotine to the mould surface (20) prior to step b).
8. Method according to any preceding Claim, comprising a step g) of forming a line of weakness (W) in the substance and/or mould surface (20) to thereby at least partially define first and second portions of the substance.
9. Method according to any preceding Claim, comprising a step h) of separating a or the first portion of the substance from a or the second portion of the substance, for example with a separator (S).
10. An article (1, 11) for forming an aerosol, the article (1, 11) comprising a cover layer (2, 12) which comprises, provides or defines a peripheral mould surface (20) circumscribing a moulded aerosol-forming substrate (3, 13), the article (1, 11) being insertable, in use, into a heating chamber of a device for generating an aerosol.
11. Article (1, 11) according to Claim 10, wherein the aerosol-forming substrate (3, 13) comprises first and second portions (13a, 13b) at least partially defined by a frangible portion of the aerosol-forming substrate and/or of the peripheral mould surface (20).
12. Article (1, 11) according to Claim 11, wherein the frangible portion comprises a separator (S) and/or a line of weakness (W) in the aerosol-forming substrate (3, 13) between the first and second portions (13a, 13b).
13. Article (1, 11) according to Claim 11 or 12, wherein the article comprises a separator (S) at least partially defining the first and second portions (13a, 13b), and the peripheral surface comprises the separator (S).
14. Article (1) according to any of Claims 11 to 13, wherein the first and second portions (13a, 13b) have substantially similar shapes and/or volumes.
15. Article (1, 11) according to any of Claims 10 to 14, wherein the aerosol-forming substrate (3, 13) comprises a foam, for example a reticulated foam, which

foam may be at least partially formed from tobacco, for example formed from reconstituted tobacco.

5 Patentansprüche

1. Verfahren zum Herstellen eines Artikels (1, 11) zum Bilden eines Aerosols, das Verfahren umfassend die Schritte:
 - a) Vorsehen einer Deckschicht (2, 12), die eine Formfläche (20) zum Definieren der Peripherie eines Artikels (1, 11) zum Bilden eines Aerosols umfasst, definiert oder vorsieht;
 - b) Aufbringen einer wenigstens teilweise flüssigen und aerosolbildendes Substrat umfassenden Substanz auf die Formfläche (20); und
 - c) Bewirken oder Zulassen der wenigstens teilweisen Verfestigung der Substanz, um dadurch einen Artikel zum Bilden eines Aerosols vorzusehen, der einen aus der Deckschicht gebildeten Umfang aufweist, wobei die Formfläche (20) das geformte aerosolbildende Substrat umhüllt.
2. Verfahren nach Anspruch 1, umfassend einen Schritt d) des Aufschäumens der Substanz.
3. Verfahren nach Anspruch 2, wobei Schritt d) im Anschluss an Schritt b) erfolgt.
4. Verfahren nach Anspruch 2 oder 3, umfassend einen Schritt e) des Vernetzens des Schaums.
5. Verfahren nach Anspruch 4, wobei Schritt e) im Anschluss an Schritt b) erfolgt.
6. Verfahren nach einem beliebigen vorhergehenden Anspruch, umfassend einen Schritt f) des Zugebens von einem oder mehreren einer flüchtigen geschmackserzeugenden Komponente, einem Aerosolbildner und Nikotin zu der Formfläche (20) und/oder der Substanz.
7. Verfahren nach Anspruch 6, wobei Schritt f) das Zugeben des einen oder der mehreren der flüchtigen geschmackserzeugenden Komponente, des Aerosolbildners und des Nikotins auf die Formfläche (20) vor dem Schritt b) umfasst.
8. Verfahren nach einem beliebigen vorhergehenden Anspruch, umfassend einen Schritt g) des Ausbildens einer Schwächelinie (W) in der Substanz und/oder der Formfläche (20), um dadurch wenigstens teilweise erste und zweite Abschnitte der Substanz zu definieren.
9. Verfahren nach einem beliebigen vorhergehenden Anspruch, umfassend einen Schritt h) des Trennens

eines oder des ersten Abschnitts der Substanz von einem oder dem zweiten Abschnitt der Substanz, beispielsweise mit einem Separator (S).

10. Artikel (1, 11) zum Bilden eines Aerosols, wobei der Artikel (1, 11) eine Deckschicht (2, 12) umfasst, die eine Umfangsformfläche (20) umfasst, bereitstellt oder definiert, die ein geformtes aerosolerzeugendes Substrat (3, 13) umhüllt, wobei der Artikel (1, 11) bei Gebrauch in eine Heizkammer einer Vorrichtung zum Erzeugen eines Aerosols einsetzbar ist.
11. Artikel (1, 11) nach Anspruch 10, wobei das aerosolbildende Substrat (3, 13) erste und zweite Abschnitte (13a, 13b) aufweist, die wenigstens teilweise durch einen zerbrechlichen Abschnitt des aerosolbildenden Substrats und/oder der peripheren Formfläche (20) definiert sind.
12. Artikel (1, 11) nach Anspruch 11, wobei der zerbrechliche Abschnitt einen Separator (S) und/oder eine Schwächelinie (W) in dem aerosolbildenden Substrat (3, 13) zwischen dem ersten und zweiten Abschnitt (13a, 13b) aufweist.
13. Artikel (1, 11) nach Anspruch 11 oder 12, wobei der Artikel einen Separator (S) aufweist, der wenigstens teilweise den ersten und zweiten Abschnitt (13a, 13b) definiert, und die Umfangsfläche den Separator (S) umfasst.
14. Artikel (1) nach einem der Ansprüche 11 bis 13, wobei der erste und der zweite Abschnitt (13a, 13b) im Wesentlichen ähnliche Formen und/oder Volumen aufweisen.
15. Artikel (1, 11) nach einem beliebigen der Ansprüche 10 bis 14, wobei das aerosolbildende Substrat (3, 13) einen Schaum, beispielsweise einen vernetzten Schaum umfasst, wobei der Schaum wenigstens teilweise aus Tabak, beispielsweise aus rekonstituiertem Tabak, gebildet sein kann.

Revendications

1. Procédé de fabrication d'un article (1, 11) destiné à former un aérosol, le procédé comprenant les étapes consistant à :
- a) fournir une couche de recouvrement (2, 12) qui comprend, définit ou fournit une surface de moule (20) pour définir la périphérie d'un article (1, 11) destiné à former un aérosol ;
- b) déposer une substance qui est au moins partiellement fluide et comprend un substrat formant aérosol dans la surface de moule (20) ; et
- c) amener ou laisser la substance se solidifier

au moins partiellement pour fournir ainsi un article destiné à former un aérosol ayant une périphérie formée à partir de la couche de recouvrement, dans lequel la surface de moule (20) entoure le substrat formant aérosol moulé.

2. Procédé selon la revendication 1, comprenant l'étape d) de moussage de la substance.
3. Procédé selon la revendication 2, dans lequel l'étape d) a lieu après l'étape b).
4. Procédé selon la revendication 2 ou 3, comprenant une étape e) de réticulation de la mousse.
5. Procédé selon la revendication 4, dans lequel l'étape e) a lieu après l'étape b).
6. Procédé selon l'une quelconque des revendications précédentes, comprenant une étape f) consistant à ajouter à la surface de moule (20) et/ou à la substance un ou plusieurs parmi un composant volatil de génération d'arôme, un agent de formation d'aérosol et la nicotine.
7. Procédé selon la revendication 6, dans lequel l'étape f) comprend l'ajout du ou de chacun des un ou plusieurs parmi le composant volatil de génération d'arôme, l'agent de formation d'aérosol et la nicotine à la surface de moule (20) avant l'étape b) .
8. Procédé selon l'une quelconque des revendications précédentes, comprenant une étape g) de formage d'une ligne de faiblesse (W) dans la substance et/ou la surface de moule (20) pour définir ainsi au moins partiellement des première et deuxième portions de la substance.
9. Procédé selon l'une quelconque des revendications précédentes, comprenant une étape h) de séparation d'une ou de la première portion de la substance d'une ou de la deuxième portion de la substance, par exemple avec un séparateur (S).
10. Article (1, 11) destiné à former un aérosol, l'article (1, 11) comprenant une couche de recouvrement (2, 12) qui comprend, fournit ou définit une surface de moule (20) périphérique entourant un substrat formant aérosol (3, 13) moulé, l'article (1, 11) pouvant être inséré, lors de l'utilisation, dans une chambre de chauffage d'un dispositif destiné à générer un aérosol.
11. Article (1, 11) selon la revendication 10, dans lequel le substrat formant aérosol (3, 13) comprend des première et deuxième portions (13a, 13b) définies au moins partiellement par une portion cassable du substrat formant aérosol et/ou de la surface de mou-

le périphérique (20).

- 12.** Article (1, 11) selon la revendication 11, dans lequel la portion cassable comprend un séparateur (S) et/ou une ligne de faiblesse (W) dans le substrat formant aérosol (3, 13) entre les première et deuxième portions (13a, 13b). 5
- 13.** Article (1, 11) selon la revendication 11 ou 12, dans lequel l'article comprend un séparateur (S) définissant au moins partiellement les première et deuxième portions (13a, 13b), et la surface périphérique comprend le séparateur (S). 10
- 14.** Article (1) selon l'une quelconque des revendications 11 à 13, dans lequel les première et deuxième portions (13a, 13b) ont des formes et/ou des volumes sensiblement similaires. 15
- 15.** Article (1, 11) selon l'une quelconque des revendications 10 à 14, dans lequel le substrat formant aérosol (3, 13) comprend une mousse, par exemple une mousse réticulée, laquelle mousse peut être au moins partiellement formée à partir de tabac, par exemple formée à partir de tabac reconstitué. 20
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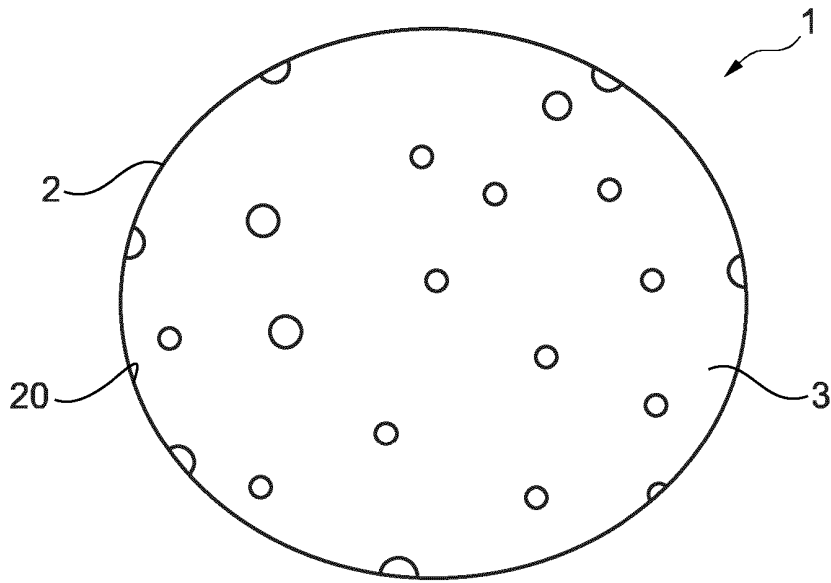


Fig. 1

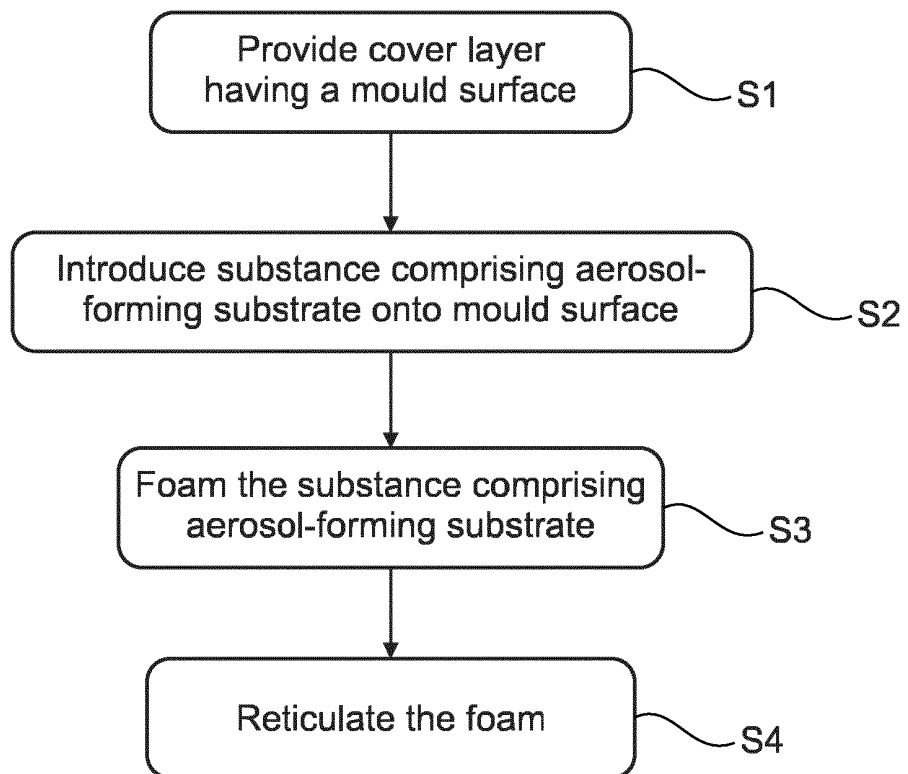


Fig. 2

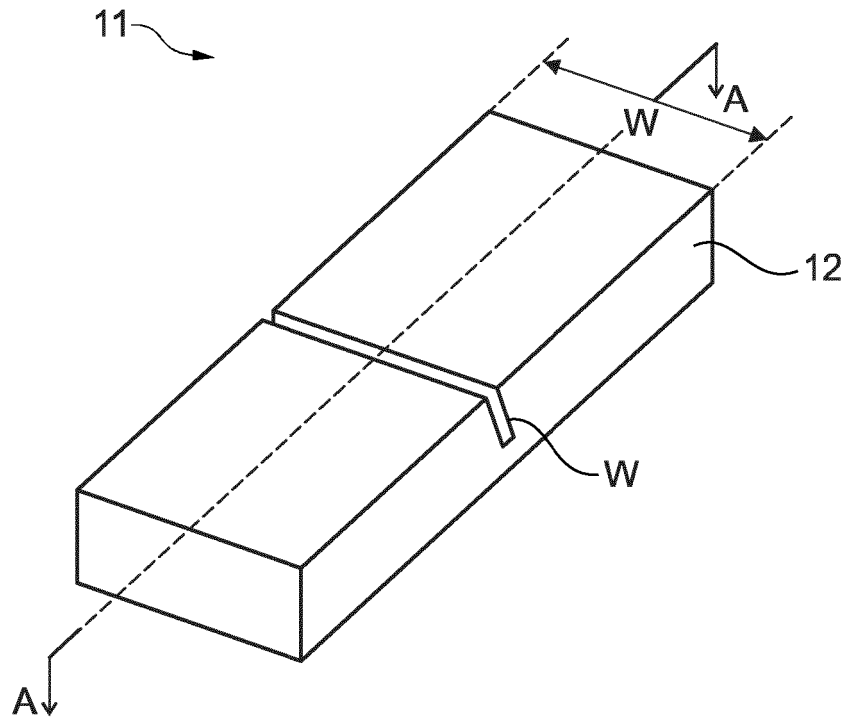


Fig. 3

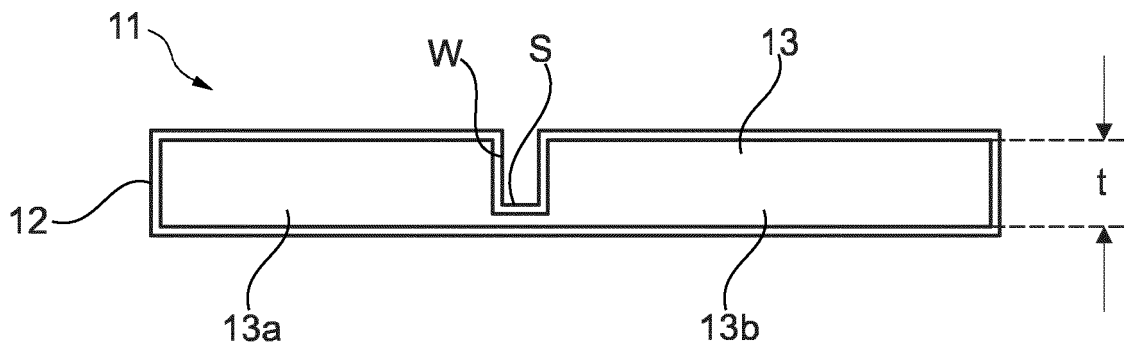


Fig. 4

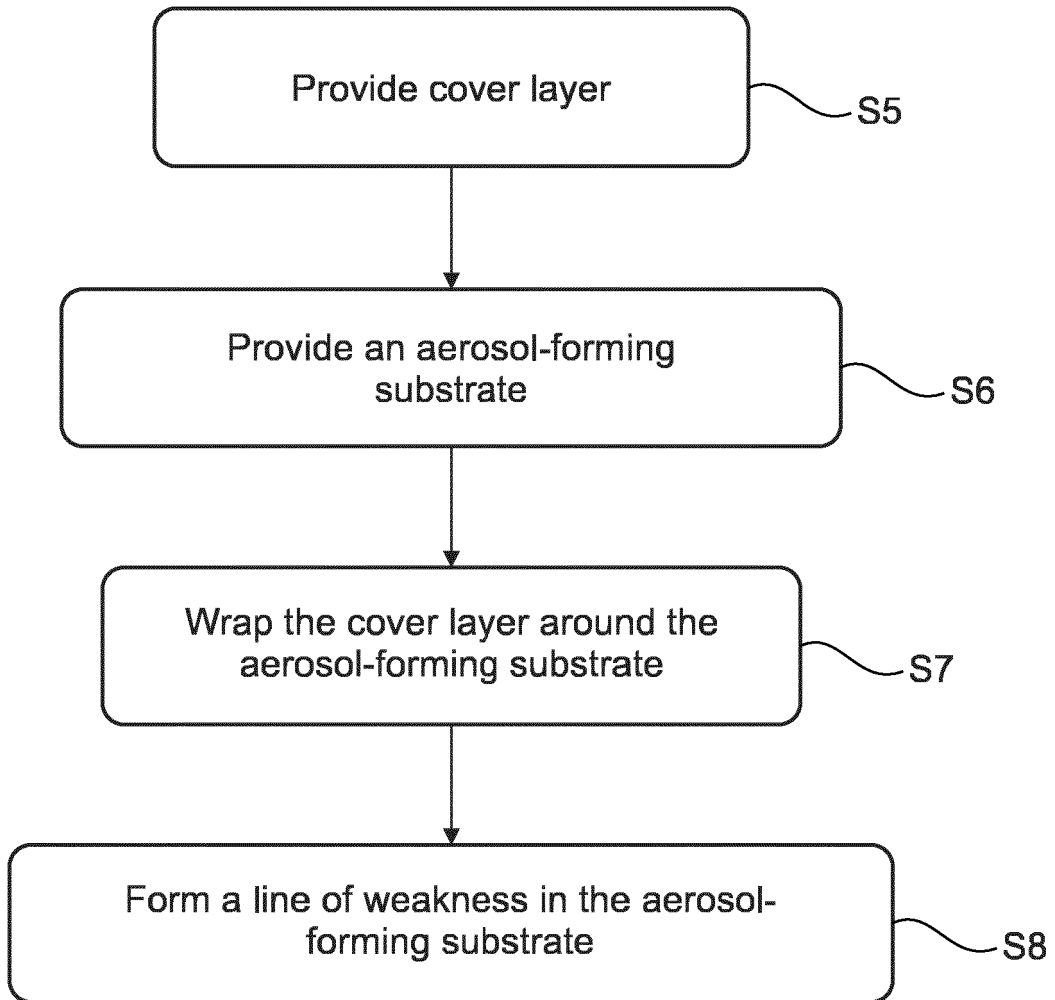


Fig. 5

REFERENCES CITED IN THE DESCRIPTION

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