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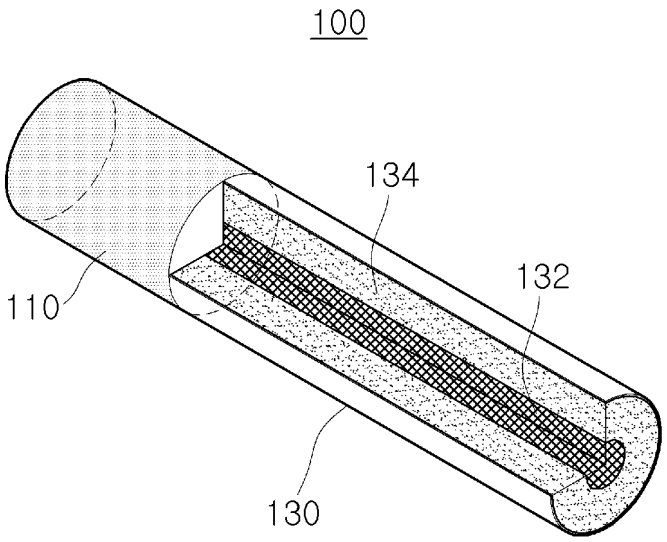
(54) **SMOKING ARTICLE COMPRISING MULTILAYERED MEDIA PORTION**

(57) Disclosed herein is a smoking article including a multilayer medium portion. The smoking article including the multilayer medium portion according to an embodiment of the present invention includes a filter portion and a medium portion including a first smoking material portion and a second smoking material portion, wherein the first smoking material portion and the second smoking material portion are disposed in a form in which the first smoking material portion is surrounded entirely or partially by the second smoking material portion in a longitudinal direction of the medium portion, and tobacco raw materials included in the first smoking material portion and tobacco raw materials included in the second smoking material portion are different.

[FIG. 1]



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Description

[Technical Field]

[0001] The present invention relates to a smoking article including a multilayer medium portion, and more particularly, to a smoking article including a multilayer medium portion that allows a plurality of tobacco flavors to be tasted in one smoking article.

[Background Art]

[0002] Smoke or an aerosol generated in smoking articles moves from upstream to downstream and is delivered to a smoker so that the smoker feels satisfied with smoking. There are several factors that determine smoking satisfaction, but the most important factor is the tobacco flavor that the smoker tastes.

[0003] Meanwhile, since smokers want to enjoy various tobacco flavors in one smoking article, in order to meet the smokers' desire, tobacco manufacturers produce and sell products in which capsules are embedded in smoking article filters. When the capsules embedded in the filters are crushed, the smokers may taste various flavors due to flavoring agents filled in the capsules.

[0004] However, since inherent tobacco flavors of smoking articles vary according to tobacco leaves filled in the smoking articles, there have been limitations in allowing smokers to taste various tobacco flavors just by the capsules embedded in the filters.

[0005] Thus, the need has arisen for new types of smoking articles that allow various tobacco flavors to be tasted in one smoking article.

[Disclosure]

[Technical Problem]

[0006] The present invention is directed to providing a new type of smoking article that allows a smoker to taste various tobacco flavors in one smoking article.

[0007] The present invention is also directed to providing a smoking article capable of allowing the tobacco flavor to gradually change over smoking time, thus increasing a user's satisfaction with smoking.

[Technical Solution]

[0008] An embodiment of the present invention provides a smoking article including a multilayer medium portion, the smoking article including a filter portion and a medium portion including a first smoking material portion and a second smoking material portion, wherein the first smoking material portion and the second smoking material portion are disposed in a form in which the first smoking material portion is surrounded entirely or partially by the second smoking material portion in a longitudinal direction of the medium portion, and tobacco raw materials included in the first smoking material portion and tobacco raw materials included in the second smoking material portion are different.

[0009] According to an embodiment of the present invention, the first smoking material portion and the second smoking material portion may further include additives in addition to the tobacco raw materials, and types and composition ratios of the additives included in the first smoking material portion may be different from types and composition ratios of the additives included in the second smoking material portion.

[0010] According to an embodiment of the present invention, a transverse cross-section of the first smoking material portion may have one of a circular shape, an elliptical shape, a regular polygon shape, and an irregular polygon shape, and the second smoking material portion may have a shape surrounding the first smoking material portion.

[0011] According to an embodiment of the present invention, the smoking article may further include a wrapper that wraps around an outer side surface of the first smoking material portion, and the first smoking material portion and the second smoking material portion may be physically partitioned by the wrapper.

[0012] According to an embodiment of the present invention, the wrapper may have characteristics of at least one of porous wrapping paper, nonporous wrapping paper, grease-resistant wrapping paper, and water-resistant wrapping paper with a coated surface.

[0013] According to an embodiment of the present invention, a resistance to draw of the first smoking material portion and a resistance to draw of the second smoking material portion may be different.

[0014] According to an embodiment of the present invention, a packing density of the tobacco raw materials included in the first smoking material portion and a packing density of the tobacco raw materials included in the second smoking material portion may be different.

[0015] According to an embodiment of the present invention, the first smoking material portion and the second smoking material portion may include a plurality of tobacco strands produced using tobacco raw materials, and the tobacco strands included in one of the first smoking material portion and the second smoking material portion may be packed to be parallel to each other in the longitudinal direction of the medium portion, and the tobacco strands included in the other one may be packed in random arrays.

[0016] According to an embodiment of the present invention, aerosols generated in the first smoking material portion and the second smoking material portion may move in a downstream direction and be mixed in the filter portion, and components of the aerosol generated in the first smoking material portion and components of the aerosol generated in the second smoking material portion may be different.

[0017] According to an embodiment of the present invention, an amount of the aerosol generated in the first

smoking material portion and an amount of the aerosol generated in the second smoking material portion may be different.

[Advantageous Effects]

[0018] According to a smoking article including a multilayer medium portion, there is an effect of allowing a smoker to taste various tobacco flavors in one smoking article.

[0019] Also, since the tobacco flavor can gradually change over smoking time, there is an effect of increasing a smoker's satisfaction with smoking.

[Description of Drawings]

[0020]

FIG. 1 is a partially cut-out perspective view of a smoking article including a multilayer medium portion according to an embodiment of the present invention.

FIG. 2 is a perspective view of a smoking article including a multilayer medium portion according to another embodiment of the present invention.

FIG. 3 is a perspective view of a smoking article including a multilayer medium portion according to still another embodiment of the present invention.

FIG. 4 is a transverse cross-sectional view of a smoking article including a multilayer medium portion according to an embodiment of the present invention.

FIG. 5 is a transverse cross-sectional view of a smoking article including a multilayer medium portion according to another embodiment of the present invention.

FIG. 6 is a longitudinal cross-sectional view of a smoking article including a multilayer medium portion according to an embodiment of the present invention.

FIG. 7 is a view illustrating an example in which a smoking article according to an embodiment of the present invention is used by being inserted into an aerosol generation device.

FIG. 8 is a view illustrating another example in which a smoking article according to an embodiment of the present invention is used by being inserted into an aerosol generation device.

[Modes of the Invention]

[0021] Hereinafter, exemplary embodiments of the present invention will be described in detail with reference to the accompanying drawings. Advantages and features of the present invention and a method of achieving the same should become clear with embodiments described in detail below with reference to the accompanying drawings. However, the present invention is not limited to embodiments disclosed below and may be implemented in various other forms. The embodiments make the disclosure of the present invention complete and are provided to completely inform one of ordinary skill in the art to which the present invention pertains of the scope of the invention. The present invention is defined only by the scope of the claims. Like reference numerals refer to like elements throughout.

[0022] Unless otherwise defined, all terms including technical or scientific terms used herein have the same meaning as commonly understood by those of ordinary skill in the art to which the present invention pertains. Terms defined in commonly used dictionaries should not be construed in an idealized or overly formal sense unless expressly so defined herein.

[0023] Also, in the specification, a singular expression includes a plural expression unless the context clearly indicates otherwise. The terms "comprises" and/or "comprising" used herein do not preclude the presence of or the possibility of adding one or more elements, steps, operations, and/or devices other than those mentioned.

[0024] Terms including ordinals such as "first" or "second" used herein may be used to describe various elements, but the elements are not limited by the terms. The terms are only used for the purpose of distinguishing one element from another element.

[0025] Throughout the specification, "smoking article" may refer to anything capable of generating an aerosol, such as tobacco (cigarette) and cigar. The smoking article may include an aerosol-generating material or an aerosol-forming substrate. Also, the smoking article may include a solid material based on tobacco raw materials, such as reconstituted tobacco leaves, shredded tobacco, and reconstituted tobacco. A smoking material may include a volatile compound.

[0026] Also, throughout the specification, "upstream" or "upstream direction" refers to a direction moving away from an oral region of a user smoking a smoking article 100, and "downstream" or "downstream direction" refers to a direction approaching the oral region of the user smoking the smoking article 100.

[0027] Further, in the specification, the smoking article 100 may be a combustion-type cigarette or a heating-type cigarette or the like that is used with an electronic cigarette device.

[0028] FIG. 1 is a partially cut-out perspective view of a smoking article including a multilayer medium portion according to an embodiment of the present invention.

[0029] The smoking article 100 including a multilayer medium portion according to an embodiment of the present invention includes a filter portion 110 and a medium portion 130.

[0030] The filter portion 110 is a region disposed downstream from the medium portion 130 and through which an aerosol material generated in the medium portion 130 passes right before being inhaled by the user.

[0031] The filter portion 110 according to an embodiment of the present invention may be formed of various materials. For example, the filter portion 110 may be pro-

duced as a cellulose acetate filter, a recessed filter including a hollow, or the like. Also, a length of the filter portion 110 may be appropriately selected within a range of 4 mm to 30 mm, and a diameter of the filter portion 110 may be appropriately selected within a range of 5 mm to 8 mm, but the present invention is not limited thereto.

[0032] The medium portion 130 includes a first smoking material portion 132 and a second smoking material portion 134. The first smoking material portion 132 and the second smoking material portion 134 are disposed in a longitudinal direction of the medium portion 130, in the form in which the first smoking material portion 132 is surrounded entirely or partially by the second smoking material portion 134. Here, being disposed in the longitudinal direction of the medium portion 130 refers to being disposed in a longitudinal axis direction of the smoking article 100.

[0033] In this case, tobacco raw materials included in the first smoking material portion 132 and tobacco raw materials included in the second smoking material portion 134 may be different.

[0034] The tobacco raw materials included in the first smoking material portion 132 and the second smoking material portion 134 may be aerosol-generating materials. The aerosol-generating materials may be rod-shaped pieces or the like formed by grinding tobacco leaves, mixing a solvent and various additives with the ground tobacco leaves to produce a tobacco slurry, drying the tobacco slurry to form a tobacco sheet, and then processing the tobacco sheet.

[0035] In one example, the aerosol-generating materials, i.e., the tobacco raw materials, included in the first smoking material portion 132 and the second smoking material portion 134 may be pieces of tobacco leaves, tobacco stems, and/or fine tobacco powder generated during tobacco processing. Specifically, the tobacco raw materials may include ground tobacco leaves, ground reconstituted tobacco, and the like. Also, the tobacco raw materials may include burley tobacco leaves, bright tobacco leaves, oriental tobacco leaves, expanded shredded tobacco, expanded tobacco midribs, reconstituted tobacco leaves, and the like.

[0036] Also, the first smoking material portion 132 and the second smoking material portion 134 may further include additives in addition to the tobacco raw materials. The additives according to an embodiment of the present invention may be at least one of a flavoring agent, a wetting agent, and an acetate compound. For example, the flavoring agent may be one of licorice, saccharose, fructose syrup, isosweet, cocoa, lavender, cinnamon, cardamom, celery, fenugreek, cascarilla, white sandalwood, bergamot, geranium, honey essence, rose oil, vanilla, lemon oil, orange oil, mint oil, cinnamon, caraway, cognac, jasmine, chamomile, menthol, cinnamon, ylang-ylang, sage, spearmint, ginger, cilantro, and coffee. Also, the wetting agent may be glycerin, propylene glycol, or the like. In this case, the types and composition ratios of the additives included in the smoking material portions 132 and 134 may be different.

[0037] The first smoking material portion 132 and the second smoking material portion 134 included in the medium portion 130 may be combusted or heated simultaneously or non-simultaneously to allow a user to taste various tobacco flavors.

[0038] Meanwhile, although the case in which the smoking article 100 according to an embodiment of the present invention only includes the filter portion 110 and the medium portion 130 has been described above as an example with reference to FIG. 1, the smoking article 100 may also be implemented to further include elements other than those illustrated.

[0039] FIG. 2 is a perspective view of a smoking article including a multilayer medium portion according to another embodiment of the present invention.

[0040] A smoking article 100 including a multilayer medium portion according to another embodiment of the present invention may, in addition to including a filter portion 110 and a medium portion 130, further include a cooling portion 150 and a support element 170.

[0041] Referring to FIG. 2, the smoking article 100 according to another embodiment of the present invention may have a form in which the filter portion 110, the cooling portion 150, the support element 170, and the medium portion 130 are sequentially arranged in that order in the upstream direction from the downstream end.

[0042] Since the filter portion 110 and the medium portion 130 are identical to those described above with reference to FIG. 1, descriptions thereof will be omitted to avoid repeated description.

[0043] The cooling portion 150 cools an aerosol generated as the medium portion 130 is heated. Consequently, the smoker may inhale the aerosol cooled to an appropriate temperature.

[0044] The length or diameter of the cooling portion 150 may be variously set according to the shape of the smoking article 100. For example, the length of the cooling portion 150 may be appropriately selected within a range of 7 mm to 20 mm. Preferably, the length of the cooling portion 150 may be about 14 mm, but the present invention is not limited thereto.

[0045] The cooling portion 150 may be made by weaving polymer fibers. In this case, a flavoring liquid may also be applied to the fibers made of polymer. Alternatively, separate fibers to which a flavoring liquid is applied and fibers made of polymer may be woven together to produce the cooling portion 150.

[0046] Alternatively, the cooling portion 150 may also be formed by a crimped polymer sheet. The polymer according to an embodiment of the present invention may be produced using a material selected from the group consisting of polyethylene (PE), polypropylene (PP), polyvinyl chloride (PVC), polyethylene terephthalate (PET), polylactic acid (PLA), cellulose acetate (CA), and aluminum foil.

[0047] Since the cooling portion 150 is formed using

the woven polymer fibers or the crimped polymer sheet, the cooling portion 150 may include at least one channel formed in a longitudinal direction of the smoking article 100. Here, the channel refers to a passage through which air or the aerosol generated in the medium portion 130 passes.

[0048] The support element 170 prevents a phenomenon in which, when the smoking article 100 is inserted into an electronic cigarette device or the like, the internal elements of the smoking article 100 are pushed in the downstream direction by a heater or the like included in the electronic cigarette device. Also, the support element 170 may cool the aerosol generated in the medium portion 130.

[0049] The support element 170 according to an embodiment of the present invention may be a cellulose acetate filter. For example, the support element 170 may be a tubular structure having a hollow formed therein.

[0050] The length and diameter of the support element 170 may be variously set according to the shape of the smoking article 100. For example, the length of the support element 170 may be appropriately selected within a range of 4 mm to 30 mm. Preferably, the length of the support element 170 may be about 10 mm, but the present invention is not limited thereto. Also, the diameter of the hollow formed in the support element 170 may be appropriately selected within a range of 2 mm to 4.5 mm, but the present invention is not limited thereto.

[0051] The hardness of the support element 170 may be adjusted by controlling the content of plasticizer during production of the support element 170. Also, a film, a tube, or the like made of a material which is the same as or different from the material of the support element 170 may be inserted into the hollow formed in the support element 170.

[0052] FIG. 3 is a perspective view of a smoking article including a multilayer medium portion according to still another embodiment of the present invention.

[0053] A smoking article 100 including a multilayer medium portion according to still another embodiment of the present invention may, in addition to including a filter portion 110, a medium portion 130, and a support element 170, further include a front plug 190.

[0054] Since the filter portion 110, the medium portion 130, and the support element 170 of the smoking article 100 illustrated in FIG. 3 are identical to those described above with reference to FIGS. 1 and 2, descriptions thereof will be omitted to avoid repeated description.

[0055] The front plug 190 may be a cellulose acetate filter. Alternatively, the front plug 190 may be formed of a paper filter, a porous molded product, or the like. The length of the front plug 190 according to an embodiment of the present invention may be in a range of 4 mm to 15 mm, but the present invention is not limited thereto. The front plug 190 may be colored or flavored.

[0056] The front plug 190 serves to prevent tobacco raw materials included in the medium portion 130 from being discharged to the outside.

[0057] Hereinafter, the structure of the medium portion 130 of the smoking article 100 according to an embodiment of the present invention will be described in detail.

[0058] FIG. 4 is a transverse cross-sectional view of a smoking article including a multilayer medium portion according to an embodiment of the present invention.

[0059] Specifically, FIG. 4 illustrates a transverse cross-sectional view of the medium portion 130. As described above, the medium portion 130 may include the first smoking material portion 132 and the second smoking material portion 134, and the first smoking material portion 132 may be surrounded by the second smoking material portion 134.

[0060] Referring to FIG. 4, the first smoking material portion 132 disposed inside the medium portion 130 and the second smoking material portion 134 surrounding the first smoking material portion 132 may have circular cross-sections and concentric cylindrical shapes. However, the shape of the cross-section of the first smoking material portion 132 is not limited to the circular shape and may, of course, be various other shapes. For example, the cross-section of the first smoking material portion 132 may have an elliptical shape, a regular polygon shape, an irregular polygon shape, or the like.

[0061] In the case in which the cross-section of the first smoking material portion 132 has one of the shapes listed above, the cross-section of the second smoking material portion 134 may have a shape surrounding the first smoking material portion 132.

[0062] Meanwhile, raw materials constituting the first smoking material portion 132 and raw materials constituting the second smoking material portion 134 may be different. Specifically, pieces of tobacco leaves, tobacco stems, and/or fine tobacco powder generated during tobacco processing which are the raw materials of the first smoking material portion 132 may be different from those included in the second smoking material portion 134.

[0063] Also, the first smoking material portion 132 and the second smoking material portion 134 may each include various additives in addition to the tobacco raw materials, and the additives included in the first smoking material portion 132 and the second smoking material portion 134 may also be different. Alternatively, the additives added to the first smoking material portion 132 and the second smoking material portion 134 may be the same, but composition ratios thereof may be different.

[0064] Therefore, it is possible to achieve an effect of allowing the smoker to taste various tobacco flavors over smoking time.

[0065] FIG. 5 is a transverse cross-sectional view of a smoking article including a multilayer medium portion according to another embodiment of the present invention.

[0066] As described above, the medium portion 130 according to an embodiment of the present invention includes the first smoking material portion 132 and the second smoking material portion 134 which are produced using different raw materials. Thus, the raw materials included in the smoking material portions may be mixed

during a production process or a distribution process in some cases.

[0067] Accordingly, the medium portion 130 according to an embodiment of the present invention may further include a wrapper 136 that wraps around an outer side surface of the first smoking material portion 132. Consequently, the first smoking material portion 132 and the second smoking material portion 134 are physically partitioned by the wrapper 136.

[0068] The wrapper 136 according to an embodiment of the present invention may be produced using general wrapping paper that is not treated to be grease-resistant. In this case, the wrapper 136 may be porous wrapping paper or nonporous wrapping paper.

[0069] In the case in which the wrapper 136 is the porous wrapping paper, the porosity may be, in Cooperation Center for Scientific Research Relative to Tobacco (CORESTA) units (CU), 6,500 CU or higher, and preferably, 24,000 CU or higher. On the other hand, in the case in which the wrapper is the nonporous wrapping paper, the porosity may be in a range of 10 CU to 200 CU.

[0070] According to another embodiment of the present invention, the wrapper 136 may be produced using grease-resistant wrapping paper. This is because, in the case in which additives such as oil and fat are included in at least one of the first smoking material portion 132 and the second smoking material portion 134, the additives included in the smoking material portions may permeate through the wrapper 136 and mix with each other.

[0071] According to still another embodiment of the present invention, the wrapper 136 may be produced using water-resistant wrapping paper. The mainstream smoke or aerosol generated in the medium portion 130 may contain a wetting agent, moisture, other compounds, and the like.

[0072] That is, since the wrapper 136 may be stained or weakened due to the additives added to the smoking material portions in the process in which the medium portion 130 is combusted, a coating layer for grease resistance or water resistance may be imparted to a surface of the wrapper 136.

[0073] The coating layer may consist of at least one of silicone materials, wax materials, and natural materials. For example, the wax materials may correspond to one of paraffin wax, embed, crystal palm, multiwax, carnauba wax, candelia wax, castor wax, microcrystalline wax, gel wax, beeswax, stearic acid, polypropylene wax, polyethylene wax, and polyethylene acrylic wax or a combination of at least two of the above-listed materials, but are not limited thereto.

[0074] Also, the silicone materials may be liquid silicone, but are not limited thereto. In addition, natural material fibers may be flax, but are not limited thereto. The flax has a characteristic in that the strength of the flax increases when the flax absorbs moisture. Thus, the flax may improve the water resistance of the wrapper 136.

[0075] As another example, the coating layer may consist of fine particles. Here, the fine particles may be microcapsules in which the silicone materials or wax materials are formed as a matrix. For example, in the fine particles, a waterproof nanoprotrusion structure may be firstly coated with methyl cellulose acetate to reinforce strength and secondly coated with a wax such as paraffin wax to strengthen the physical properties of powder. Therefore, the coating layer including the fine particles may improve the water resistance of the wrapper 136.

[0076] FIG. 6 is a longitudinal cross-sectional view of a smoking article including a multilayer medium portion according to an embodiment of the present invention.

[0077] The case in which the smoking article is a conventional cigarette will be described as an example with reference to FIG. 6.

[0078] Referring to FIG. 6, the first smoking material portion 132 and the second smoking material portion 134 are disposed in the longitudinal direction of the medium portion 130, and the first smoking material portion 132 is surrounded by the second smoking material portion 134.

[0079] The aerosols generated in the first smoking material portion 132 and the second smoking material portion 134 move in the downstream direction and are delivered to the smoker through the filter portion 110. In this case, since the tobacco raw materials included in the first smoking material portion 132 and the tobacco raw materials included in the second smoking material portion 134 are different, components of the aerosols generated in the smoking material portions may also be different. Therefore, the smoker may taste various tobacco flavors in one smoking article.

[0080] Meanwhile, the amount of aerosol generated in the first smoking material portion 132 and the amount of aerosol generated in the second smoking material portion 134 may have to be different to enhance the tobacco flavor in some cases. For example, there may be case in which the tobacco flavor is further enhanced when the amount of aerosol generated in the first smoking material portion 132 is larger than the amount of aerosol generated in the second smoking material portion 134.

[0081] To this end, the resistance to draw (RTD) of the first smoking material portion 132 and the RTD of the second smoking material portion 134 may be made different. This is because, when the smoker puffs the smoking article 100 with a constant force, the aerosol generated in the smoking material portion with a relatively higher RTD is introduced into the filter portion 110 in a smaller amount than the aerosol generated in the smoking material portion with a relatively lower RTD, and as a result, the mixed amount of aerosol originating from each smoking material portion may be adjusted.

[0082] The RTD of the smoking material portion may be determined by various factors.

[0083] In one example, each smoking material portion is implemented in a form in which tobacco raw materials are packed therein, and the RTD of each smoking material portion may be adjusted by varying the packing density. Thus, according to an embodiment of the present invention, a packing density of the tobacco raw materials

included in the first smoking material portion 132 and a packing density of the tobacco raw materials included in the second smoking material portion 134 may be different.

[0084] In another example, the tobacco raw materials included in each smoking material portion may be processed into the form of strands and then packed in the smoking material portion. When the tobacco strands are packed to be parallel to each other in the longitudinal direction of the medium portion 130, air passages may be formed in the smoking material portions and movement of the aerosols is facilitated. On the other hand, when the tobacco strands are packed in random arrays, movement of the stream of aerosols is not facilitated, and thus the RTD relatively increases.

[0085] Accordingly, the tobacco strands included in one of the first smoking material portion 132 and the second smoking material portion 134 may be packed to be parallel to each other in the longitudinal direction of the medium portion 130, and the tobacco strands included in the other one may be packed in random arrays.

[0086] According to the smoking article 100 according to an embodiment of the present invention, it is possible to achieve the effect of allowing the user to taste various tobacco flavors in the smoking article 100.

[0087] FIG. 7 is a view illustrating an example in which a smoking article according to an embodiment of the present invention is used by being inserted into an aerosol generation device.

[0088] Referring to FIG. 7, an aerosol generation device 200 may include a battery (not illustrated), a controller (not illustrated), and a heater 210. According to an embodiment of the present invention, the battery, controller, and heater constituting the aerosol generation device 200 may be arranged in a row, but the arrangement structure is not limited thereto. The aerosol generation device 200 may, of course, further include general-purpose elements other than those mentioned above.

[0089] The battery supplies power used to operate the aerosol generation device 200. For example, the battery may supply power to allow the heater to be heated and supply power required for operation of the controller. Also, the battery may supply power required for operation of a display, a sensor, a motor, and the like installed in the aerosol generation device 200.

[0090] The controller may control the overall operation of the aerosol generation device 200. Specifically, the controller may check the states of not only the battery and the heater but also other components of the aerosol generation device 200 and determine whether the aerosol generation device 200 is in an operable state.

[0091] The controller may include at least one processor. The processor may be implemented with an array of a plurality of logic gates or implemented with a combination of a general-purpose microprocessor and a memory which stores a program that may be executed by the microprocessor. Also, those of ordinary skill in the art to which the present embodiment pertains should understand that the controller may also be implemented with other forms of hardware.

[0092] The heater 210 may be heated by the power supplied from the battery. The heater 210 according to an embodiment of the present invention may be an electrically-resistive heater including an electrically-conductive track and may be heated as current is applied. In another embodiment, the heater 10 may be implemented as an induction heating-type heater. In this case, the heater 210 may include an electrically-conductive coil.

[0093] The case in which the heater 210 is a needle-shaped or rod-shaped heating element is illustrated as an example in FIG. 7, but the shape of the heater 210 is not limited thereto, and the heater 210 may, of course, be implemented in various other shapes such as a plate shape.

[0094] In the case in which the smoking article 100 according to an embodiment of the present invention is inserted into the aerosol generation device 200, the entire medium portion 130 may be inserted into the aerosol generation device 200 and the filter portion 110 may be exposed to the outside. Alternatively, a portion of the filter portion 110 may be inserted with the medium portion 130, or only a portion of the medium portion 130 may be inserted.

[0095] The smoker may, while holding the filter portion 110 in his or her mouth, inhale the aerosols generated in the first smoking material portion 132 and the second smoking material portion 134 of the medium portion 130.

[0096] In one example, outside air may be introduced through at least one air passage formed in the aerosol generation device 200. For example, the opening/closing state of the air passage formed in the aerosol generation device 200 or the size of the air passage may be adjusted by the smoker. Accordingly, vapor production, smoking sensation, and the like may be adjusted by the user. In another example, outside air may be introduced into the smoking article 100 through at least one air hole (not illustrated) formed in a surface of the smoking article 100.

[0097] In the case in which the smoking article 100 according to an embodiment of the present invention is used by being inserted into the internal heating-type aerosol generation device 200 illustrated in FIG. 7, the first smoking material portion 132 disposed inside the medium portion 130 is heated first, and an aerosol is intensively generated from the first smoking material portion 132. Consequently, the smoker may taste a tobacco flavor from the aerosol generated in the first smoking material portion 132 in an early stage of smoking.

[0098] As the smoking time elapses, the heat generated by the heater 210 diffuses from the center of the medium portion 130 toward an outer side surface thereof, and thus an aerosol is generated in the second smoking material portion 134. Consequently, the smoker may taste a tobacco flavor originating from the second smoking material portion 134 in a later stage of smoking.

[0099] FIG. 8 is a view illustrating another example in which a smoking article according to an embodiment of

the present invention is used by being inserted into an aerosol generation device.

[0100] Referring to FIG. 8, an aerosol generation device 200 may include a battery (not illustrated), a controller (not illustrated), a vaporizer (not illustrated), and a heater 210.

[0101] Since the battery and the controller are identical to those described above with reference to FIG. 7, descriptions thereof will be omitted to avoid repeated description.

[0102] The heater 210 may be disposed along an outer side surface inside an insertion hole formed in a cylindrical shape at one surface of the aerosol generation device 200. When the smoking article 100 according to an embodiment of the present invention is inserted into the insertion hole, the heater 210 is operated and performs heating from an outer side surface of the smoking article 100.

[0103] Therefore, the second smoking material portion 134 disposed at an outer side of the medium portion 130 is heated first, and an aerosol is intensively generated from the second smoking material portion 134. Consequently, the smoker may taste a tobacco flavor from the aerosol generated in the second smoking material portion 134 in an early stage of smoking.

[0104] As the smoking time elapses, the heat generated by the heater 210 diffuses in an inward direction from the outer side surface of the medium portion 130, and thus the first smoking material portion 132 is heated to generate an aerosol. Consequently, the smoker may taste a tobacco flavor originating from the first smoking material portion 132 in a later stage of smoking.

[0105] Alternatively, the smoker may taste a tobacco flavor that is generated as the aerosol generated in the first smoking material portion 132 and the aerosol generated in the second smoking material portion 134 are mixed. In this case, as the smoking time elapses, the amount of aerosol generated in the second smoking material portion 134 gradually decreases while the amount of aerosol generated in the first smoking material portion 132 gradually increases. Consequently, the smoker may taste various tobacco flavors.

[0106] Those of ordinary skill in the art related to the present embodiments should understand that the present invention may be implemented in modified forms within the scope not departing from essential characteristics of the above description. Therefore, the methods disclosed herein should be considered as illustrative rather than limiting. The scope of the present invention is defined by the claims below rather than by the above description, and all differences within the scope equivalent to the claims should be interpreted as falling within the scope of the present invention.

Claims

1. A smoking article including a multilayer medium portion, the smoking article comprising:

   a filter portion; and
   a medium portion including a first smoking material portion and a second smoking material portion,
   wherein the first smoking material portion and the second smoking material portion are disposed in a form in which the first smoking material portion is surrounded entirely or partially by the second smoking material portion in a longitudinal direction of the medium portion, and tobacco raw materials included in the first smoking material portion and tobacco raw materials included in the second smoking material portion are different.

2. The smoking article of claim 1, wherein:

   the first smoking material portion and the second smoking material portion further include additives in addition to the tobacco raw materials; and
   types and composition ratios of the additives included in the first smoking material portion are different from types and composition ratios of the additives included in the second smoking material portion.

3. The smoking article of claim 1, wherein a transverse cross-section of the first smoking material portion has one of a circular shape, an elliptical shape, a regular polygon shape, and an irregular polygon shape, and the second smoking material portion has a shape surrounding the first smoking material portion.

4. The smoking article of claim 1, further comprising a wrapper that wraps around an outer side surface of the first smoking material portion,
   wherein the first smoking material portion and the second smoking material portion are physically partitioned by the wrapper.

5. The smoking article of claim 4, wherein the wrapper has characteristics of at least one of porous wrapping paper, nonporous wrapping paper, grease-resistant wrapping paper, and water-resistant wrapping paper with a coated surface.

6. The smoking article of claim 1, wherein a resistance to draw of the first smoking material portion and a resistance to draw of the second smoking material portion are different.

7. The smoking article of claim 6, wherein a packing density of the tobacco raw materials included in the first smoking material portion and a packing density

of the tobacco raw materials included in the second smoking material portion are different.

8. The smoking article of claim 6, wherein:

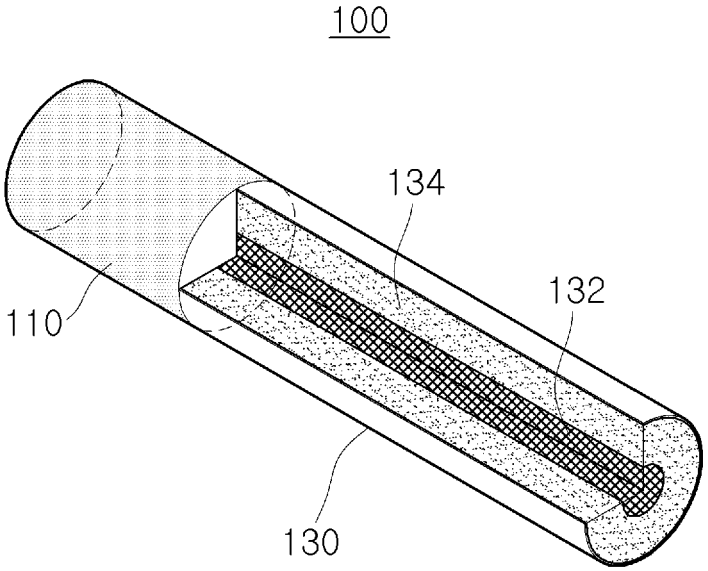
the first smoking material portion and the second smoking material portion include a plurality of tobacco strands produced using tobacco raw materials; and

the tobacco strands included in one of the first smoking material portion and the second smoking material portion are packed to be parallel to each other in the longitudinal direction of the medium portion, and the tobacco strands included in the other one are packed in random arrays.

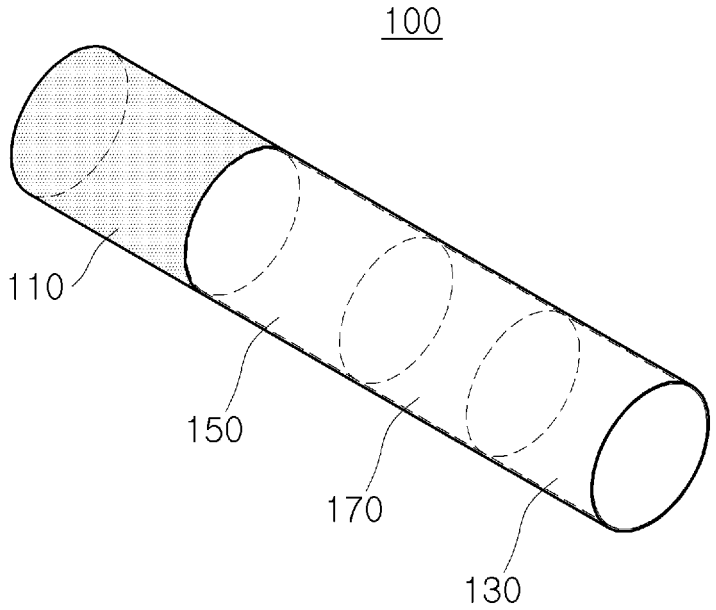
9. The smoking article of claim 1, wherein aerosols generated in the first smoking material portion and the second smoking material portion move in a downstream direction and are mixed in the filter portion, and components of the aerosol generated in the first smoking material portion and components of the aerosol generated in the second smoking material portion are different.

10. The smoking article of claim 9, wherein an amount of the aerosol generated in the first smoking material portion and an amount of the aerosol generated in the second smoking material portion are different.

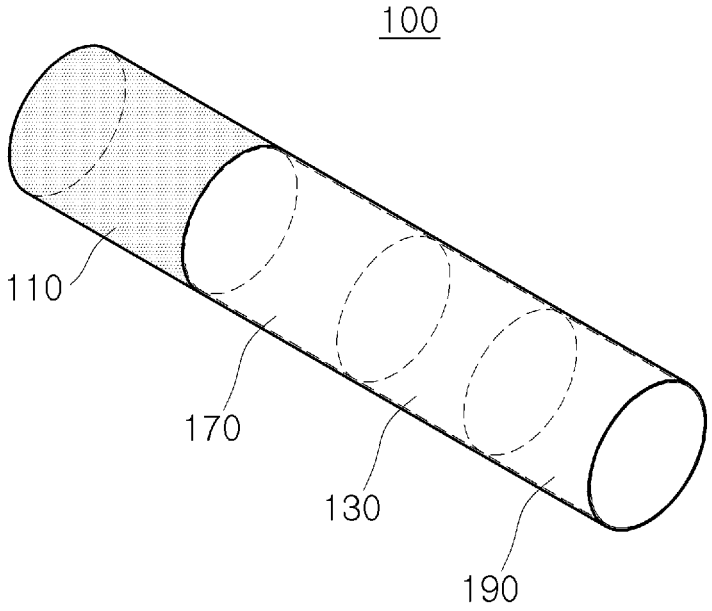
[FIG. 1]



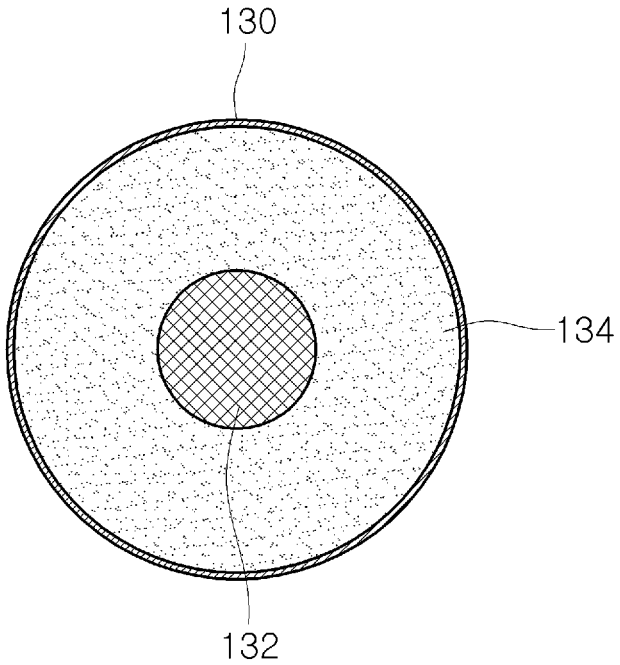
[FIG. 2]



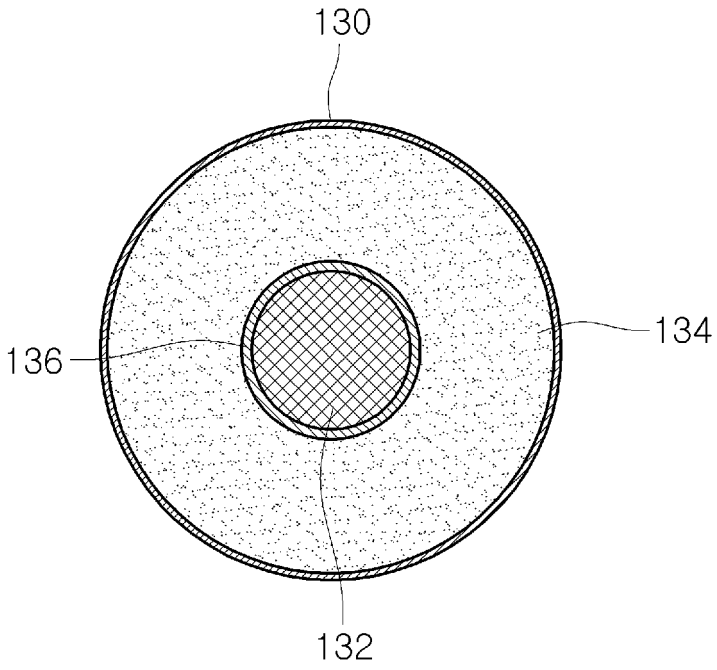
[FIG. 3]



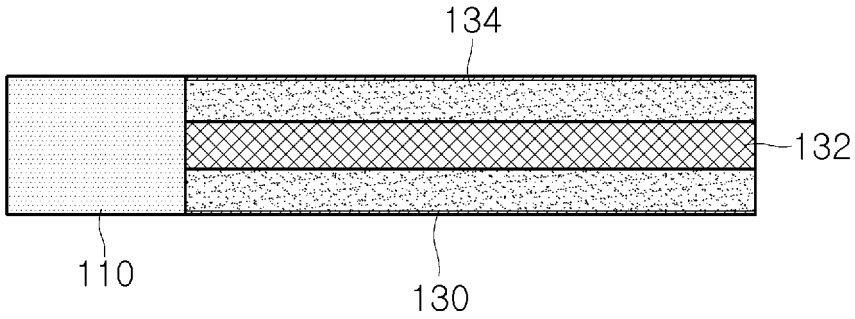
[FIG. 4]



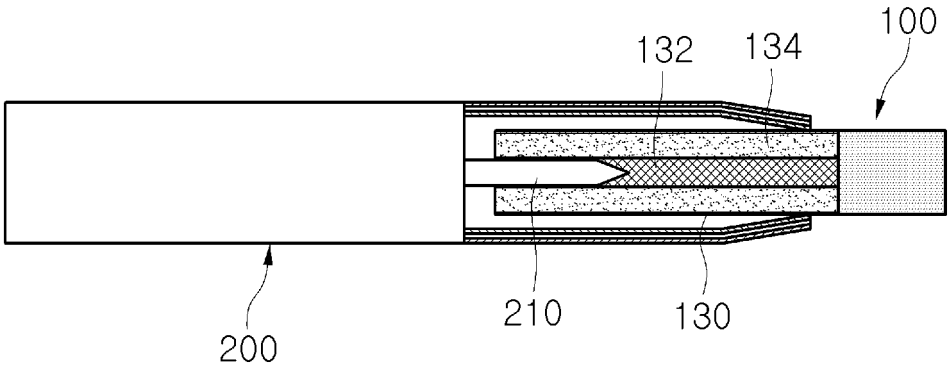
[FIG. 5]



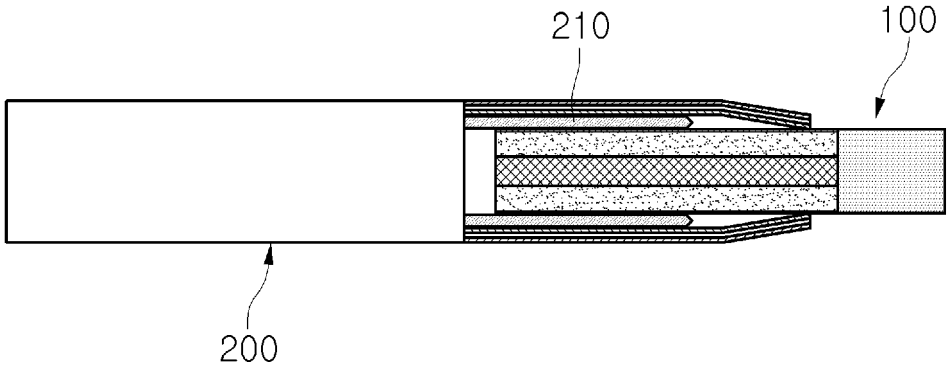
[FIG. 6]



[FIG. 7]



[FIG. 8]



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2020/010406

A. CLASSIFICATION OF SUBJECT MATTER

A24D 1/20(2020.01)i; ***A24D 1/04***(2006.01)i; ***A24D 1/02***(2006.01)i; ***A24C 5/18***(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A24D 1/20; A24B 15/28; A24D 1/00; A24D 1/02; A24D 1/12; A24D 3/06; A24F 47/00; A24D 1/04; A24C 5/18

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models: IPC as above
Japanese utility models and applications for utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS (KIPO internal) & keywords: 흡연(Smoking), 매질부(medium), 다중(multi), 에어로졸(aerosol), 담배(cigarette)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 10-2019-0093026 A (KT & G CORPORATION) 08 August 2019. See abstract; paragraphs [0027], [0029] and [0031]; and claims 1-9.	1-10
Y	US 2017-0064995 A1 (R.J. REYNOLDS TOBACCO COMPANY) 09 March 2017. See abstract; paragraphs [0019]-[0021]; figure 3; and claims 1-11.	1-10
Y	KR 10-2019-0093027 A (KT & G CORPORATION) 08 August 2019. See abstract; and claims 1-10.	1-10
A	KR 10-2000-0070533 A (BRITISH AMERICAN TOBACCO (INVESTMENTS) LIMITED) 25 November 2000. See abstract; and claims 1-41.	1-10

☑ Further documents are listed in the continuation of Box C. ☑ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"D" document cited by the applicant in the international application
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
26 November 2020	**26 November 2020**
Name and mailing address of the ISA/KR **Korean Intellectual Property Office** **Government Complex Daejeon Building 4, 189, Cheongsa-ro, Seo-gu, Daejeon, Republic of Korea** **35208** Facsimile No. **+82-42-481-8578**	Authorized officer Telephone No.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2020/010406

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
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