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(54) **SMOKING ARTICLE AND AEROSOL-GENERATING SYSTEM COMPRISING SAME**

(57) A smoking article includes a medium accommodation portion that includes a cigarette column portion filled with cut tobacco leaves and a paper tube portion, a moisturizer accommodation portion that is disposed on one side of the medium accommodation portion and that includes an aerosol generating material, and a filter por-

tion disposed on another side of the medium accommodation portion. A length of the cigarette column portion may be 1/2 of a length of a general medium accommodation portion, and the entire cigarette column portion may be heated by a heater.

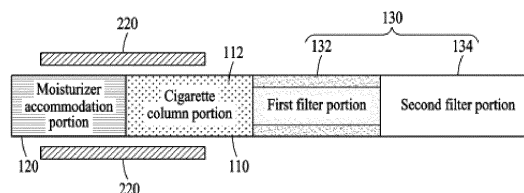


FIG. 1A (Related Art)

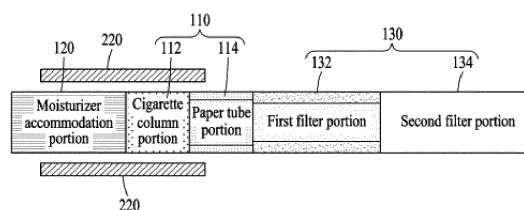


FIG. 1B

Description**Technical Field**

5 **[0001]** The present disclosure relates to a smoking article, and an aerosol generating system including the smoking article.

Description of Related Art

10 **[0002]** Recently, demands for alternative ways to overcome disadvantages of general cigarettes have increased. For example, there is a growing demand for a method of generating an aerosol by heating an aerosol generating material included in a cigarette rather than by burning the cigarette.

15 **[0003]** Accordingly, the present inventors developed a smoking article that includes a medium accommodation portion having a reduced length in comparison to existing smoking articles and additionally includes a paper tube portion, thereby accomplishing the present disclosure.

Disclosure of the Invention**Technical Goals**

20 **[0004]** A technical goal to be achieved by the present disclosure is to provide a smoking article including a medium accommodation portion that includes a cigarette column portion and a paper tube portion.

25 **[0005]** In addition, the present disclosure provides an aerosol generating device that may provide an aerosol that is inhalable by a user by heating an aerosol generating material stored in the smoking article.

30 **[0006]** In addition, the present disclosure provides an aerosol generating system including the smoking article and the aerosol generating device.

35 **[0007]** However, technical goals to be achieved by the present disclosure are not limited to those described above, and other goals not mentioned above can be clearly understood by one of ordinary skill in the art from the following description.

Technical Solutions

40 **[0008]** To solve the above problems, the present disclosure provides a smoking article including a medium accommodation portion that includes a cigarette column portion and a paper tube portion.

45 **[0009]** In an embodiment of the present disclosure, the smoking article may include a medium accommodation portion including: a cigarette column portion filled with cut tobacco leaves; and a paper tube portion; a moisturizer accommodation portion disposed on one side of the medium accommodation portion and including an aerosol generating material; and a filter portion disposed on another side of the medium accommodation portion.

50 **[0010]** In another embodiment of the present disclosure, the entire cigarette column portion may be heated by a heater.

55 **[0011]** In another embodiment of the present disclosure, a length of the cigarette column portion may be 1/2 of a length of a general medium accommodation portion including only a cigarette column portion. The length of the cigarette column portion may be desirably in a range of 4 to 8 millimeters (mm), more desirably 6 mm. The length of the paper tube portion may be equal to the length of the cigarette column portion and may be desirably in a range of 4 to 8 mm, more desirably 6 mm. The length of the cigarette column portion may be less than the length of the moisturizer accommodation portion.

60 **[0012]** In another embodiment of the present disclosure, the cut tobacco leaves may be prepared by finely cutting a slurry-type reconstituted tobacco sheet.

65 **[0013]** In another embodiment of the present disclosure, the cut tobacco leaves in the cigarette column portion may be arranged in the same direction.

70 **[0014]** In another embodiment of the present disclosure, the aerosol generating material may include glycerin (Gly) and propylene glycol (PG) and optionally include nicotine.

75 **[0015]** In another embodiment of the present disclosure, the moisturizer accommodation portion may have a length of 8 to 12 mm, desirably 10 mm.

80 **[0016]** In another embodiment of the present disclosure, the filter portion may include: a first filter portion including a cavity therein; and a second filter portion fully filled with a filtration material.

85 **[0017]** In another embodiment of the present disclosure, the first filter portion may have a length of 10 to 14 mm, desirably 12 mm, and the second filter portion may have a length of 12 to 16 mm, desirably 14 mm.

90 **[0018]** In another embodiment of the present disclosure, at least one segment selected from a group consisting of the medium accommodation portion, the moisturizer accommodation portion, and the filter portion may be wrapped with a

segment wrapper.

[0019] In another embodiment of the present disclosure, a plurality of segments wrapped with the segment wrapper may be wrapped with a total wrapper.

[0020] In another embodiment of the present disclosure, the medium accommodation portion may have a resistance to draw of 50 to 70 mmH₂O, desirably 60 mmH₂O.

[0021] The present disclosure also provides an aerosol generating device that is configured to provide an aerosol inhalable by a user, by heating the aerosol generating material stored in the smoking article.

[0022] In an embodiment of the present disclosure, the aerosol generating device may be configured to receive the smoking article.

[0023] In another embodiment of the present disclosure, the aerosol generating device may include: an elongated cavity configured to accommodate the smoking article; a heater configured to heat at least a part of each of the medium accommodation portion and the moisturizer accommodation portion of the smoking article; and a controller electrically connected to the heater.

[0024] In another embodiment of the present disclosure, the heater may heat the entire cigarette column portion and a part of the paper tube portion in the medium accommodation portion.

[0025] In addition, the present disclosure provides an aerosol generating system including the smoking article and the aerosol generating device.

Effects

[0026] According to embodiments, a smoking article, an aerosol generating device, and an aerosol generating system may reduce the length of a medium accommodation portion in comparison to an existing smoking article and additionally include a paper tube portion, to reduce a resistance to draw and increase an amount of atomization.

[0027] According to embodiments, a smoking article, an aerosol generating device, and an aerosol generating system may increase an amount of migration of each of total particulate matter (TPM), tar, nicotine, propylene glycol, glycerin, and water.

[0028] According to embodiments, a smoking article, an aerosol generating device, and an aerosol generating system may form a cigarette column portion by arranging a finely cut slurry-type reconstituted tobacco sheet in a straight line, to secure an air low channel and increase an amount of atomization.

[0029] According to embodiments, a smoking article, an aerosol generating device, and an aerosol generating system may be easily inhaled by a consumer and provide a good smoking taste.

[0030] The effects of the smoking article, the aerosol generating device and the aerosol generating system according to an embodiment are not limited to the above-mentioned effects, and other unmentioned effects can be clearly understood from the following description by one of ordinary skill in the art.

Brief Description of Drawings

[0031] FIGS. 1A and 1B are diagrams illustrating segments constituting a smoking article: FIG. 1A illustrates an existing smoking article including a medium accommodation portion including only a cigarette column portion without a paper tube portion; and FIG. 1B illustrates a smoking article including a medium accommodation portion that includes a cigarette column portion and a paper tube portion according to an embodiment of the present disclosure.

FIG. 2 is a diagram illustrating an existing smoking article.

FIG. 3 is a diagram illustrating a smoking article according to an embodiment.

FIG. 4 is a diagram schematically illustrating an aerosol generating device according to an embodiment.

FIG. 5 is a diagram schematically illustrating an aerosol generating system in a state in which a smoking article and an aerosol generating device are coupled, according to an embodiment.

Best Mode for Carrying Out the Invention

[0032] Hereinafter, embodiments will be described in detail with reference to the accompanying drawings. However, various alterations and modifications may be made to the embodiments. Here, the embodiments are not construed as limited to the disclosure. The embodiments should be understood to include all changes, equivalents, and replacements within the idea and the technical scope of the disclosure.

[0033] The terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting. The singular forms "a", "an", and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will be further understood that the terms "comprises/comprising" and/or "includes/including" when used herein, specify the presence of stated features, integers, steps, operations, elements, and/or components,

but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components and/or groups thereof.

[0034] Unless otherwise defined, all terms including technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which the embodiments belong. Terms, such as those defined in commonly used dictionaries, are to be interpreted as having a meaning that is consistent with their meaning in the context of the relevant art and the present disclosure, and are not to be interpreted in an idealized or overly formal sense unless expressly so defined herein.

[0035] When describing the embodiments with reference to the accompanying drawings, like reference numerals refer to like components and a repeated description related thereto will be omitted. In the description of embodiments, detailed description of well-known related structures or functions will be omitted when it is deemed that such description will cause ambiguous interpretation of the present disclosure.

[0036] In addition, terms such as first, second, A, B, (a), (b), and the like may be used to describe components of the embodiments. These terms are used only for the purpose of discriminating one component from another component, and the nature, the sequences, or the orders of the components are not limited by the terms. It should be noted that if one component is described as being "connected", "coupled" or "joined" to another component, the former may be directly "connected," "coupled", and "joined" to the latter or "connected", "coupled", and "joined" to the latter via another component.

[0037] A component, which has the same common function as a component included in any one embodiment, will be described by using the same name in other embodiments. Unless disclosed to the contrary, the configuration disclosed in any one embodiment may be applied to other embodiments, and the specific description of the repeated configuration will be omitted.

[0038] In the present disclosure, the terms "upstream" and "downstream" are used to indicate relative positions of segments of a smoking article based on a direction in which a user inhales air using the smoking article. The smoking article may include a downstream end (that is, a portion into which air flows) and an upstream end (that is, a portion from which air flows out) opposite to the downstream end. When using the smoking article, a user may bite the downstream end of the smoking article. The downstream end may also be referred to as a mouth end (ME) and the upstream end may also be referred to as a tobacco end (TE). The term "end" may also be described as an "end portion".

[0039] FIG. 3 is a diagram illustrating a smoking article according to an embodiment.

[0040] Referring to FIG. 3, a smoking article 100 according to an embodiment may include a medium accommodation portion 110, a moisturizer accommodation portion 120 disposed on one side of the medium accommodation portion 110 to generate an aerosol, and a filter portion 130 disposed on another side of the medium accommodation portion 110. Segments of the smoking article 100, that is, the medium accommodation portion 110, the moisturizer accommodation portion 120, and the filter portion 130 may be individually wrapped or not wrapped with a segment wrapper 140. Segments wrapped with the segment wrapper 140 may be wrapped with a total wrapper 150 to form a single smoking article.

[0041] According to an embodiment, a "medium" may include a solid material that is based on tobacco raw materials, such as reconstituted tobacco sheets, cut tobacco leaves, reconstituted tobacco, and the like, and/or a liquid composition that is based on glycerin, propylene glycol, nicotine, menthol, caffeine, γ -aminobutyric acid (GABA), taurine, vitamin, or various flavoring agents. However, embodiments are not limited thereto.

[0042] In the present disclosure, the "medium accommodation portion 110" may include a cigarette column portion 112 and a paper tube portion 114. Unlike the existing smoking article (FIG. 2), the paper tube portion 114 may be included and the length of cigarette column portion 112 may be reduced, and thus it is possible to reduce a resistance to draw of the medium accommodation portion (FIGS. 1A and 1B).

[0043] In the present disclosure, the "cigarette column portion 112" may be a segment filled with cut tobacco leaves. Here, the cut tobacco leaves may include a solid material based on raw tobacco materials. The cigarette column portion 112 may be prepared by finely cutting general cut leaves or a slurry-type reconstituted tobacco sheet, and may be formed by combining a plurality of cut tobacco leaves in the same direction or randomly.

[0044] Desirably, the cigarette column portion 112 may secure an airflow channel and increase an amount of atomization by arranging cut tobacco leaves prepared by finely cutting 130 mg of a slurry-type reconstituted tobacco sheet in the same direction. When the cigarette column portion is prepared using general cut leaves, the level of resistance to draw may be at least 90 mmH₂O, and when the level of resistance to draw is less than or equal to 90 mmH₂O, the quality may decrease due to contamination and insufficient hardness due to a relatively high degree to which cut leaves fall off an end of a cigarette. On the other hand, when the cigarette column portion is prepared using a slurry-type reconstituted tobacco sheet, the quality of the preparing may be good at a resistance to draw of 120 mmH₂O based on the cigarette column portion with the length of 12 mm. When the length of the cigarette column portion is reduced to 6 mm, the medium accommodation portion may be prepared at a resistance to draw of 60 mmH₂O.

[0045] In the present disclosure, the "paper tube portion 114" refers to a segment obtained by preparing hard paper having thermal stability in the form of a tube. In the present disclosure, the length of the cigarette column portion 112 may be reduced to half of the length of the existing smoking article and the paper tube portion 114 with the same length

as that of the cigarette column portion 112 may be added. Thus, the resistance to draw of the medium accommodation portion 110 may be reduced from 100 mmH₂O to 60 mmH₂O, and the resistance to draw of the smoking article 100 including the medium accommodation portion 110 may also be reduced, to increase the amount of atomization. In other words, in the smoking article 100 according to an embodiment of the present disclosure, a decrement in the amount of atomization due to a blocking phenomenon of the cigarette column portion may be prevented.

[0046] In addition, the medium accommodation portion 110 may further contain other additives, such as a moisturizer, a flavoring agent, and/or an organic acid. The moisturizer may be, for example, glycerin, propylene glycol, ethylene glycol, dipropylene glycol, diethylene glycol, triethylene glycol, tetraethylene glycol, or oleyl alcohol, but is not limited thereto. The flavoring agent may be, for example, licorice, sucrose, fructose syrup, isosweet, cocoa, lavender, cinnamon, cardamom, celery, fenugreek, cascarilla, sandalwood, bergamot, geranium, honey essence, rose oil, vanilla, lemon oil, orange oil, mint oil, cinnamon, caraway, cognac, jasmine, chamomile, menthol, cassia, ylang-ylang, sage, spearmint, ginger, coriander, or coffee, but is not limited thereto.

[0047] In the present disclosure, the "moisturizer accommodation portion 120" may contain a moisturizer. The moisturizer may include glycerin and propylene glycol, and may further include at least one of ethylene glycol, dipropylene glycol, diethylene glycol, triethylene glycol, tetraethylene glycol, oleyl alcohol, and water. In addition, the moisturizer accommodation portion 120 may further include nicotine. However, materials included in the moisturizer accommodation portion 120 are not limited thereto. The moisturizer may maintain an appropriate level of moisture in an aerosol generated when a smoking article is heated, thereby mellowing a unique taste of tobacco and enriching an amount of atomization.

[0048] In the present disclosure, the "filter portion 130" may include at least one segment, and may include, for example, at least one of a tube filter, a cooling structure, and a recess filter. Desirably, the filter portion 130 may include a first filter portion 132 including a cavity therein, and a second filter portion 134 fully filled with a filtration material. The filtration material may include a cellulose-based material (e.g., acetate, paper, etc.).

[0049] To measure a resistance to draw, analyze aerosol components, and perform sensory evaluation with respect to a smoking article according to an embodiment of the present disclosure, a smoking article was manufactured as shown in Table 1 below.

[Table 1]

Classification	Length of smoking article (48 mm in total)	Moisturizer accommodation portion	Medium accommodation portion	Filter portion
Control group	10+12+12+14	50 mg of glycerin	Cigarette column portion with length of 12 mm	Same (first filter portion and second filter portion)
Experimental group	10+12(6+6)*+12+14		Cigarette column portion with length of 6 mm Paper tube portion with length of 6 mm	

[0050] In a control group corresponding to an existing smoking article, 5 mm of the cigarette column portion was not heated, and a smoking article of an experimental group was manufactured by reducing the length of a cigarette column portion and adding a paper tube portion such that the entire cigarette column portion was heated.

Experimental Example 1. Measurement of Resistance to Draw

[0051] As a result of measuring a resistance to draw of a medium accommodation portion using a resistance-to-draw measuring device (KADIEN), a resistance to draw of a medium accommodation portion in a control group was 100 mmH₂O, whereas a resistance to draw of a medium accommodation portion in an experimental group was 60 mmH₂O, which indicates a value reduced by about 40%. In addition, a smoking article including the medium accommodation portion in the experimental group also exhibits an extremely low resistance to draw in comparison to the control group. In other words, the present disclosure may provide a smoking article that may be easily inhaled by a consumer due to the reduced resistance to draw and that has a greater amount of atomization.

Experimental Example 2. Analysis of Aerosol Components

[0052] Table 2 shows results obtained by analyzing components of an aerosol generated by 9 puffs and pack diffusion conditions using a Health Canada (HC) method that is an internationally recognized analysis method for general cigarettes.

[Table 2]

Classification	HC conditions, 9 puffs, pack diffusion, PV1-2					
	TPM	Tar	Nic.	PG	Gly.	Water
Control group	31.2	15.9	1.16	0.41	6.87	14.2
Experimental group	47.2	24.2	0.87	0.53	13.7	22.2

[0053] As a result of reducing a length of a cigarette column portion of a medium accommodation portion and adding a paper tube portion, it is confirmed that an aerosol of the experimental group contains a significantly large amount of total particulate matter (TPM), total aerosol residue (TAR), propylene glycol, glycerin, and water, in comparison to the control group. In particular, an amount of migration of glycerin, which is an index to determine the amount of atomization, increased twofold or more.

[0054] In addition, Table 3 shows results obtained by analyzing components of an aerosol generated by 4 puffs and pack diffusion conditions using the above-described Health Canada (HC) method, in order to identify amounts of migration of the components during an initial inhalation.

[Table 3]

Classification	HC conditions, initial 4 puffs, pack diffusion, PV1-2					
	TPM	Tar	Nic.	PG	Gly.	Water
Control group	20.6	8.79	0.66	0.26	2.45	11.1
Experimental group	27.9	12.2	0.31	0.27	4.56	15.4

[0055] Even at the initial inhalation, amounts of migration of total particulate matter (TPM), Tar, propylene glycol (PG), glycerin (Gly), and water are all high.

Experimental Example 3. Sensory Evaluation

[0056] An initial amount of atomization, an intensity of smoking taste, the total amount of atomization, stimulus properties, off-flavor, persistence of smoking taste, and overall satisfaction of the smoking article were evaluated. Sensory evaluation was measured by a 7-point scoring method after about 10 to 14 puffs of experts with experience in sensory evaluation in the field of smoking articles. Specifically, the sensory evaluation was performed based on (i) the smoking article of the control group including a cigarette column portion with the length of 12 mm prepared by a slurry-type reconstituted tobacco sheet, and (ii) the smoking article of the experimental group including a cigarette column portion with the length of 6 mm prepared by a slurry-type reconstituted tobacco sheet, and results of the sensory evaluation are shown in Table 4 below.

[Table 4]

Classification	Initial amount of atomization (1~2Puff) ***	Intensity of smoking taste	Total amount of atomization**	Stimulus properties	Off-flavor	Persistence of smoking taste	Overall satisfaction**
Control group	1	4.2	3.1	3.9	3.1	3.5	2.8
Experimental group	3.8	4.0	5.0	3.2	3.0	4.0	4.5
P-value	0.006	0.721	0.013	0.381	0.296	0.287	0.019
※P-value comparison samples: Cut leaves + 12 mm plate vs two types of 6 mm reconstituted tobacco sheets (significance level ***1%, **5%)							

[0057] As a result, it is confirmed that a smoking article manufactured by reducing the length of the cigarette column portion 112, adding the paper tube portion 114, and preparing the cigarette column portion 112 by finely cutting the

slurry-type reconstituted tobacco sheet is statistically significantly different from a smoking article that includes a cigarette column portion with a length of 12 mm prepared by mixing general cut leaves and a slurry-type reconstituted tobacco sheet, in terms of the initial amount of atomization, the total amount of atomization, and the overall satisfaction.

[0058] In other words, the smoking article according to an embodiment of the present disclosure is extremely excellent in the amount of atomization during inhalation once or twice and the total amount of atomization, and a taste of a cigarette felt by a consumer, that is, an excellent smoking taste, lasted for a long time, and accordingly the highest overall satisfaction was shown.

[0059] FIGS. 4 and 5 illustrate examples in which a smoking article 100 including the above-described medium accommodation portion 110 is used.

[0060] FIG. 4 is a diagram schematically illustrating an aerosol generating device 200 according to an embodiment.

[0061] Referring to FIG. 4, the aerosol generating device 200 includes an elongated cavity 210, a heater 220, and a controller 230. The elongated cavity 210 may be configured to accommodate the smoking article 100. The controller 230 may be electrically connected to the heater 220 to control a temperature to heat the smoking article 100. The aerosol generating device 200 may further include a battery 240 configured to supply power in a process of generating an aerosol.

[0062] FIG. 5 is a diagram schematically illustrating an aerosol generating system 10 in a state in which a smoking article 100 and an aerosol generating device 200 are coupled, according to an embodiment.

[0063] Referring to FIG. 5, the aerosol generating system 10 may include the smoking article 100, and the aerosol generating device 200. The smoking article 100 may be coupled to tightly fit an elongated cavity 210 of the aerosol generating device 200. In the state in which the smoking article 100 is coupled to the aerosol generating device 200, the heater 220 may heat at least a part of each of a medium accommodation portion 110 and a moisturizer accommodation portion 120 of the smoking article 100. Desirably, the heater 220 may heat a part of the moisturizer accommodation portion 120, the entire cigarette column portion 112, and a part of the paper tube portion 114.

[0064] Specifically, in an existing smoking article (control group), a moisturizer accommodation portion has a length of 10 mm, a cigarette column portion has a length of 12 mm, a first filter portion has a length of 12 mm, and a second filter portion has a length of 14 mm. Here, the heater 220 may heat 7 mm of a downstream end of the moisturizer accommodation portion and 7 mm of an upstream end of the cigarette column portion. On the other hand, in the smoking article according to an embodiment of the present disclosure, a moisturizer accommodation portion may have a length of 10 mm, a cigarette column portion may have a length of 6 mm, a paper tube portion may have a length of 6 mm, a first filter portion may have a length of 12 mm, and a second filter portion may have a length of 14 mm. Here, the heater 220 may heat 7 mm of a downstream end of the moisturizer accommodation portion, 6 mm of the cigarette column portion, and 1 mm of an upstream end of the paper tube portion (FIGS. 1A and 1B). Therefore, the smoking article according to an embodiment of the present disclosure may optimize heat transfer by heating the entire cigarette column portion.

[0065] While the embodiments are described with reference to drawings, it will be apparent to one of ordinary skill in the art that various alterations and modifications in form and details may be made in these embodiments without departing from the spirit and scope of the claims and their equivalents. For example, suitable results may be achieved if the described techniques are performed in a different order and/or if components in a described system, architecture, device, or circuit are combined in a different manner and/or replaced or supplemented by other components or their equivalents.

[0066] Therefore, other implementations, other embodiments, and equivalents to the claims are also within the scope of the following claims.

Claims

1. A smoking article comprising:

a medium accommodation portion comprising: a cigarette column portion filled with cut tobacco leaves; and a paper tube portion;
a moisturizer accommodation portion disposed on one side of the medium accommodation portion and comprising an aerosol generating material; and
a filter portion disposed on another side of the medium accommodation portion, wherein the entire cigarette column portion is heated by a heater.

2. The smoking article of claim 1, wherein a length of the cigarette column portion is 1/2 of a length of a general medium accommodation portion.

3. The smoking article of claim 1, wherein

the cigarette column portion has a length of 4 to 8 millimeters (mm), and
the paper tube portion has a length of 4 to 8 mm.

4. The smoking article of claim 1, wherein the cut tobacco leaves are prepared by finely cutting a slurry-type reconstituted tobacco sheet.

5. The smoking article of claim 1, wherein the cut tobacco leaves in the cigarette column portion are arranged in a same direction.

6. The smoking article of claim 1, wherein the aerosol generating material comprises glycerin and propylene glycol and optionally comprises nicotine.

7. The smoking article of claim 1, wherein the filter portion comprises:

a first filter portion comprising a cavity therein; and
a second filter portion fully filled with a filtration material.

8. The smoking article of claim 1, wherein at least one segment selected from a group consisting of the medium accommodation portion, the moisturizer accommodation portion, and the filter portion is wrapped with a segment wrapper.

9. The smoking article of claim 8, wherein a plurality of segments wrapped with the segment wrapper is wrapped with a total wrapper.

10. The smoking article of claim 1, wherein the medium accommodation portion has a resistance to draw of 50 to 70 mmH₂O.

11. An aerosol generating device, wherein the aerosol generating device is configured to receive the smoking article of claim 1 and provide an aerosol inhalable by a user by heating the aerosol generating material stored in the smoking article.

12. The aerosol generating device of claim 11, wherein the aerosol generating device comprises:

an elongated cavity configured to accommodate the smoking article;
a heater configured to heat at least a part of each of the medium accommodation portion and the moisturizer accommodation portion of the smoking article; and
a controller electrically connected to the heater.

13. The aerosol generating device of claim 12, wherein the heater is configured to heat the entire cigarette column portion and a part of the paper tube portion in the medium accommodation portion.

14. An aerosol generating system comprising a smoking article and an aerosol generating device, wherein

the smoking article comprises:

a medium accommodation portion comprising: a cigarette column portion filled with cut tobacco leaves;
and a paper tube portion;
a moisturizer accommodation portion disposed on one side of the medium accommodation portion and comprising an aerosol generating material; and
a filter portion disposed on another side of the medium accommodation portion, wherein the entire cigarette column portion is heated by a heater, and

the aerosol generating device is configured to receive the smoking article and provide an aerosol inhalable by a user by heating the aerosol generating material stored in the smoking article.

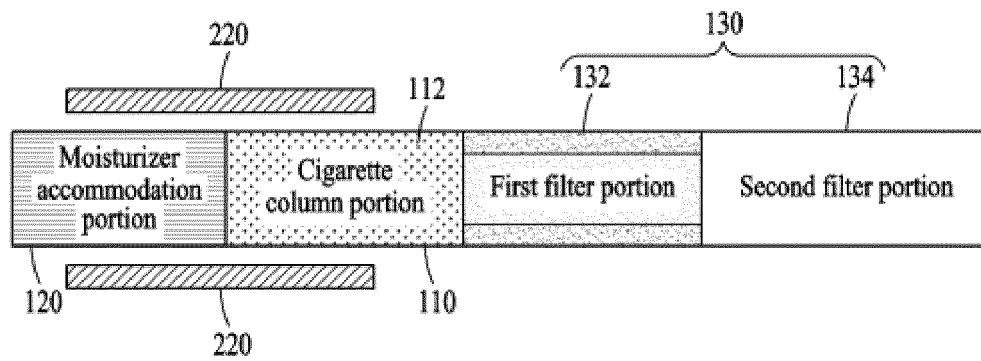


FIG. 1A (Related Art)

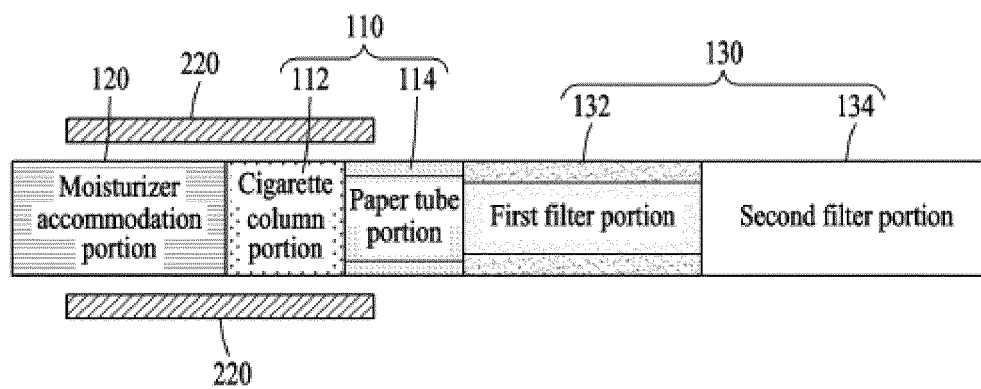


FIG. 1B

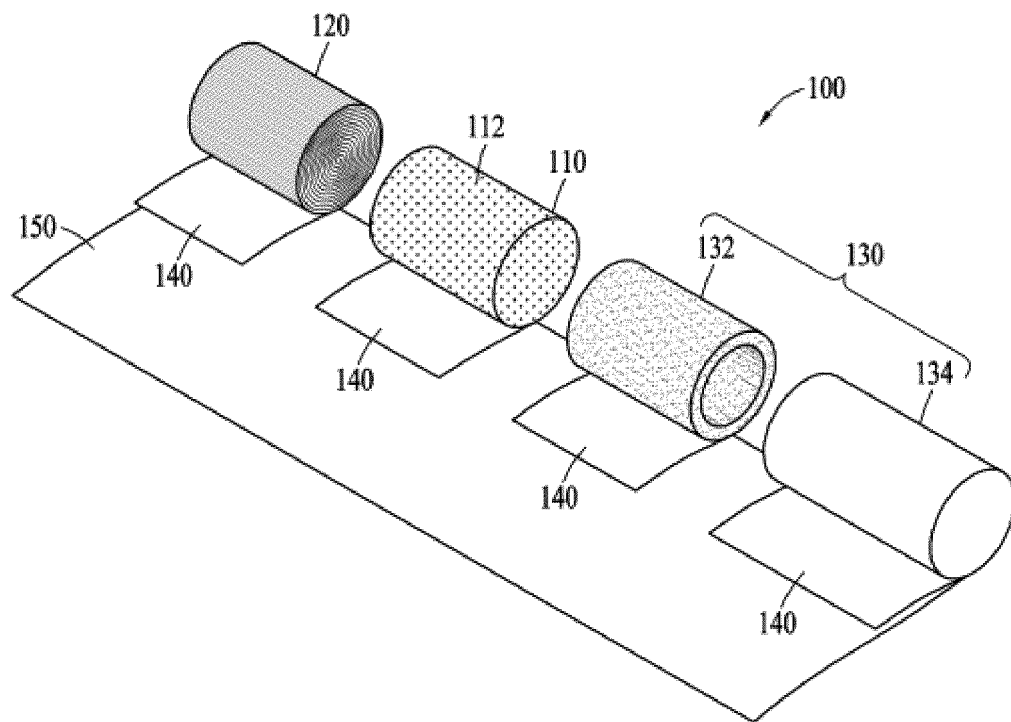


FIG. 2 (Related Art)

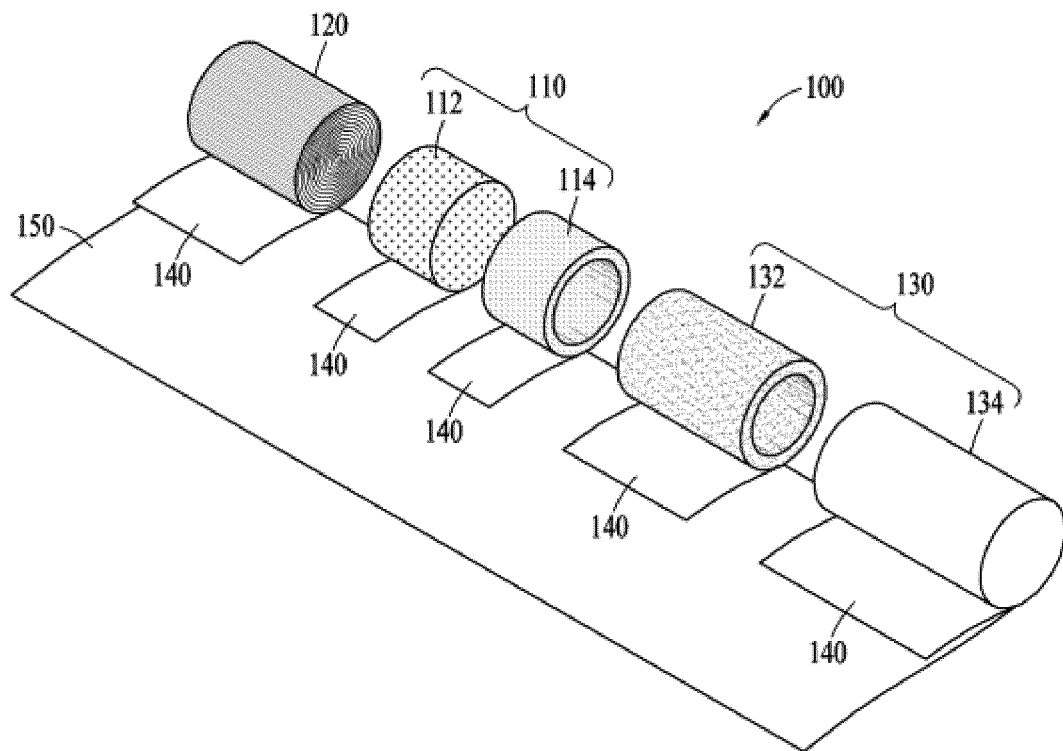


FIG. 3

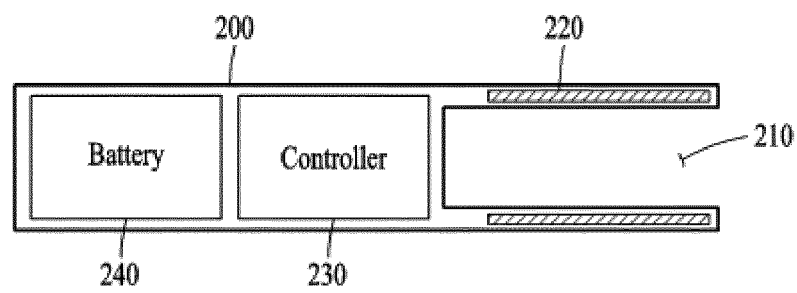


FIG. 4

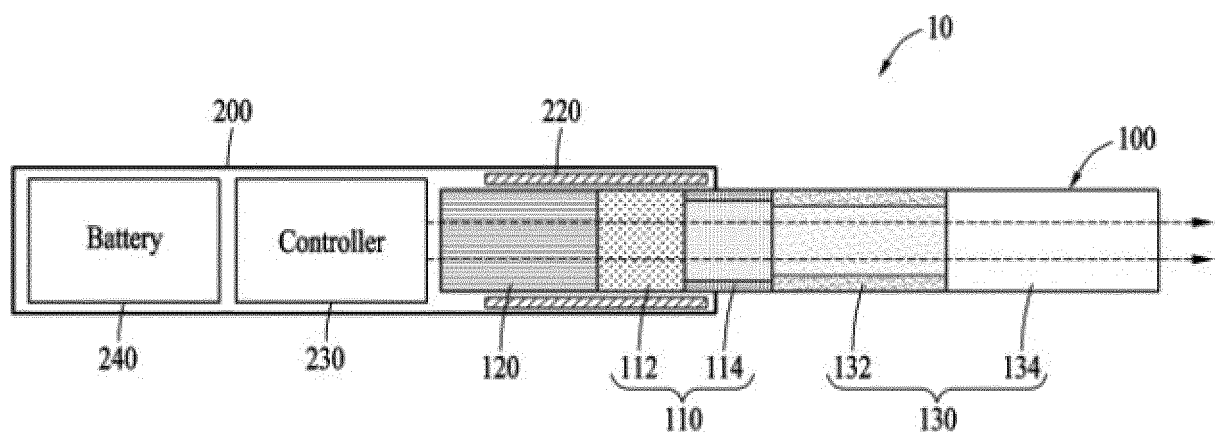


FIG. 5

INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2023/003494

A. CLASSIFICATION OF SUBJECT MATTER

A24D 1/20(2020.01)i; A24B 13/02(2006.01)i; A24D 1/04(2006.01)i; A24D 1/02(2006.01)i; A24B 7/00(2006.01)i;
A24B 15/32(2006.01)i; A24B 15/24(2006.01)i; A24D 3/04(2006.01)i; A24D 3/02(2006.01)i; A24F 40/46(2020.01)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(2020.01); A24D 1/00(2006.01); A24D 3/02(2006.01); A24D 3/06(2006.01); A24F 47/00(2006.01);
A61M 11/04(2006.01); G01N 33/00(2006.01)

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: 에어로졸 (aerosol), 필터 (filter), 히터 (heater), 슬러리 (slurry), 래퍼 (wrapper)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 10-2020-0054156 A (KT & G CORPORATION) 19 May 2020 (2020-05-19) See paragraphs [0003], [0018]-[0020] and [0033]; and claims 1-11.	1-14
A	KR 10-2019-0093027 A (KT & G CORPORATION) 08 August 2019 (2019-08-08) See entire document.	1-14
A	KR 10-2019-0015213 A (PHILIP MORRIS PRODUCTS S.A.) 13 February 2019 (2019-02-13) See entire document.	1-14
A	US 2015-0272208 A1 (R.J. REYNOLDS TOBACCO COMPANY) 01 October 2015 (2015-10-01) See entire document.	1-14
A	US 2017-0303588 A1 (BATISTA, R. N.) 26 October 2017 (2017-10-26) See entire document.	1-14

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

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

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