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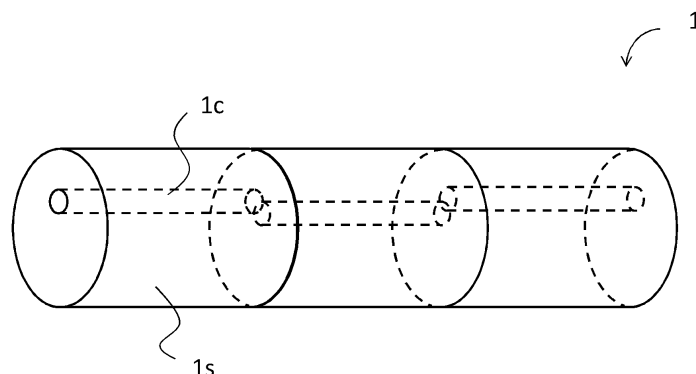
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(54) **TOBACCO ROD FOR FLAVOR INHALER**

(57) The present invention provides a tobacco rod for a flavor inhaler, including a plurality of rod-shaped segments connected to one another, in which each of the segments includes a cylindrical container and a flavor source including tobacco filled in the cylindrical container,

the flavor source being filled in such a manner as to form, over a longitudinal direction, a channel for causing a flavor component to pass therethrough, and the channels of the segments are discontinuously connected at the connecting portion.

Fig. 1



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Description

TECHNICAL FIELD

5 **[0001]** The present invention relates to a tobacco rod for a flavor inhaler, and more particularly, it relates to a tobacco rod for a direct heating type or indirect heating type flavor inhaler.

BACKGROUND ART

10 **[0002]** A direct heating type flavor inhaler and an indirect heating type flavor inhaler have been developed to be used instead of a conventional combustion type smoking article. PTL 1 discloses a heating type smoking article including a gathered or crimped tobacco material sheet.

CITATION LIST

15

PATENT LITERATURE

[0003] PTL 1: Japanese Patent No. 6017546

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SUMMARY OF INVENTION

TECHNICAL PROBLEM

25 **[0004]** A flavor source of a direct heating type flavor inhaler is heated at a lower temperature than a conventional combustion type tobacco, and a flavor source of an indirect heating type flavor inhaler is not directly heated. Therefore, in the direct heating type flavor inhaler and the indirect heating type flavor inhaler, a flavor component does not have a high volatilization property as compared with that of the conventional combustion type tobacco. In consideration of these circumstances, an object of the present invention is to provide a tobacco rod for a flavor inhaler having high volatilization efficiency of a flavor component.

30

SOLUTION TO PROBLEM

35 **[0005]** The present inventors made earnest studies to find that the above-described problem can be solved by a tobacco rod in which a plurality of segments are connected to one another in such a manner that channels of the segments are discontinuous. Specifically, the above-described problem is solved by the following present invention.

(Embodiment 1)

40 **[0006]** A tobacco rod for a flavor inhaler, comprising a plurality of rod-shaped segments connected to one another, in which each of the segments includes a cylindrical container and a flavor source including tobacco filled in the cylindrical container, the flavor source being filled in such a manner as to form, over a longitudinal direction, a channel for causing a flavor component to pass therethrough, and the channels of the segments are discontinuously connected at the connecting portion.

45

(Embodiment 2)

[0007] The tobacco rod according to the embodiment 1, wherein the tobacco rod is for use in a direct heating type or indirect heating type flavor inhaler.

50

(Embodiment 3)

[0008] The tobacco rod according to any one of the embodiments 2 to 4, in which the flavor source comprises a surface-treated flavor generating sheet.

55

(Embodiment 4)

[0009] The tobacco rod according to the embodiment 2 or 3, in which a side surface of the cylindrical container is made of a material selected from the group consisting of paper, a resin, a metal, and a combination thereof.

(Embodiment 5)

[0010] The tobacco rod according to any one of the embodiments 2 to 4, in which the side surface of the cylindrical container has a multilayer structure.

(Embodiment 6)

[0011] The tobacco rod according to any one of the embodiments 2 to 5, in which the side surface of the cylindrical container has an permeability of less than 1 coresta unit.

(Embodiment 7)

[0012] The tobacco rod according to any one of the embodiments 2 to 6, in which the flavor source comprises a plurality of strip-shaped flavor generating sheets, and a longitudinal direction of the sheets is substantially parallel to the longitudinal direction of the cylindrical container.

(Embodiment 8)

[0013] The tobacco rod according to any one of the embodiments 2 to 7, in which the flavor source comprises an aerosol source that generates aerosol.

(Embodiment 9)

[0014] A method for producing the tobacco rod according to any one of the embodiments 1 to 8, including: a step of providing a precursor that includes a cylindrical container and a flavor source including tobacco filled in the cylindrical container, the flavor source being filled in such a manner as to form, over a longitudinal direction, a channel for causing a flavor component to pass therethrough; a step of preparing two or more of the segments by cutting the precursor in a direction vertical to the longitudinal direction; and a step of rotating one or more of the segments in a circumferential direction around a longitudinal direction axis.

(Embodiment 10)

[0015] A direct heating type or indirect heating type flavor inhaler, comprising the tobacco rod according to any one of the embodiments 1 to 8.

(Embodiment 11)

[0016] The flavor inhaler according to the embodiment 10, further comprising an aerosol source that generates aerosol on an upstream side of the tobacco rod.

(Embodiment 12)

[0017] An ultrasonic vibration type flavor inhaler, comprising the tobacco rod according to the embodiment 1.

ADVANTAGEOUS EFFECTS OF INVENTION

[0018] The present invention can provide a tobacco rod for a flavor inhaler having high volatilization efficiency of a flavor component.

BRIEF DESCRIPTION OF DRAWINGS

[0019]

Fig. 1 is a schematic diagram of a tobacco rod.

Fig. 2 is a cross-sectional view of a segment according to one embodiment.

Fig. 3 illustrates a schematic diagram and a cross-sectional view of the segment according to another embodiment.

Fig. 4 is a conceptual diagram of a direct heating type flavor inhaler.

Fig. 5 is a conceptual diagram of an indirect heating type flavor inhaler.

Fig. 6 is a conceptual diagram of an indirect heating type flavor inhaling system according to one embodiment.

Fig. 7 is a cross-sectional view of a cartridge according to one embodiment.

Fig. 8 is a conceptual diagram illustrating a method for producing a tobacco rod.

Fig. 9 is a diagram of correlation between the number of segments and a volatilization property of a flavor component.

DESCRIPTION OF EMBODIMENTS

[0020] The present invention will now be described in detail. In the present invention, the term "X to Y" embraces end values of X and Y.

1. Tobacco Rod

[0021] A tobacco rod refers to a cylindrical member that generates a flavor. A side on a mouthpiece end of the tobacco rod is referred to as the "downstream" side, and the other side is referred to as the "upstream" side. The outline of the tobacco rod is illustrated in Fig. 1. Fig. 1 is a perspective view of the tobacco rod. In the drawing, a reference sign 1 denotes the tobacco rod, a reference sign 1s denotes a segment included in the tobacco rod 1, and a reference sign 1c denotes a channel for causing a flavor component to pass therethrough over a longitudinal direction. As illustrated in this drawing, the channels 1c are connected to each other discontinuously at a connecting surface between the segments 1s. The term "connected discontinuously" means that the channels are connected to overlap with each other not wholly but partially. Although one channel 1c in each segment 1s is illustrated in this drawing for ease of understanding, there can be present a plurality of channels 1c. When a plurality of channels 1c are present, one or more discontinuously connected channels may be formed over the longitudinal direction of the tobacco rod 1. Besides, the channels provided over the longitudinal direction may have one or more discontinuously connected sites. For example, when three rod-shaped segments are present, either a connecting portion between the first and second segments or a connecting portion between the second and third segments may have a discontinuously connected site. Since such channels are provided in the present invention, a time when aerosol stays in the tobacco rod 1 can be extended, and hence, volatilization efficiency of a flavor component can be improved. An example of a substance to be used for comparison of a volatilization property of a flavor component includes nicotine.

[0022] The cross-sectional shape of the tobacco rod 1 is not limited, and can be a circular, elliptical, polygonal, or rounded polygonal shape. The size of the cross-sectional shape of the tobacco rod 1 is not limited, and the maximum length (hereinafter also referred to as the "width") is preferably 1 mm or more, and more preferably 3 mm or more. The upper limit is preferably 9 mm or less, and more preferably 7 mm or less. The length of the tobacco rod 1 is preferably 40 mm or less, and more preferably 25 mm or less. The lower limit is preferably 1 mm or more, and more preferably 5 mm or more. The length of the segment 1s can be appropriately adjusted depending on the length of the tobacco rod 1 and the number of segments.

(1) Flavor Source

[0023] The segment 1s comprises a flavor source 10 including tobacco. The flavor source 10 including tobacco (hereinafter also simply referred to as the "flavor source") forms a channel through which aerosol flows over the longitudinal direction of the segment 1s. Therefore, the flavor source 10 including tobacco is preferably a flavor generating sheet. The flavor generating sheet can be a sheet in which a component capable of generating a flavor is supported on a sheet substrate, or a sheet made of a material that generates a flavor. Examples of the component capable of generating a flavor include a smoking flavor component contained in a tobacco raw material, and a perfume component such as menthol. The sheet substrate can be, for example, a tobacco material such as a compressed tobacco pellet or a tobacco powder, and is preferably a tobacco material. In other words, the flavor generating sheet may contain a tobacco-derived material in either the sheet substrate or the component capable of generating a flavor, and in one embodiment, a tobacco sheet in which a component capable of generating a flavor if necessary is supported on a substrate sheet of a tobacco material is preferably used.

1) Channel

[0024] The flavor source 10 is filled in a cylindrical container 12 described below in such a manner as to form channel voids over the longitudinal direction. Fig. 2 is a cross-sectional view of the segment 1s in which a flavor generating sheet 10s is folded to be filled in the cylindrical container 12 as the flavor source 10. Fig. 2(1) illustrates an embodiment in which the flavor generating sheet 10s not having been subjected to a surface treatment is filled, and Fig. 2(2) illustrates an embodiment in which the flavor generating sheet 10s having been subjected to a surface treatment such as crimping is filled. In this case, the number of flavor generating sheets to be filled is not limited, can be 1 to 3, and is preferably 1

from the viewpoint of manufacturability.

[0025] The amount of the flavor source 10 to be filled is appropriately adjusted, and in one embodiment, the amount is preferably 40 to 90% by volume based on the volume of the cylindrical container 12. A more preferable lower limit is 50% by volume or more, 55% by volume or more, or 60% by volume or more, and a more preferable upper limit is 60% by volume or less, 65% by volume or less, 70% by volume or less, 80% by volume or less, or 90% by volume or less. When a plurality of channels 1c are present, the channels may have substantially uniform cross-sectional areas, or there may be one or more channels having larger cross-sectional areas than the others. In the later embodiment, it is preferable that the channels having the larger cross-sectional areas are discontinuously connected.

[0026] If the flavor generating sheet 10s is used as the flavor source 10, at least one surface of the sheet is preferably subjected to a surface treatment. The surface treatment refers to a process for forming a plurality of irregularities on the front surface or the rear surface of the flavor generating sheet 10s. The surface treatment is not especially limited, and crimping process, embossing process, debossing process, half cutting process, or the like can be performed. The crimping process is a process for forming wrinkles in the sheet. For example, when the flavor generating sheet 10s is allowed to pass between a pair of rollers each having a plurality of projections on the surface, the crimping process can be performed by forming wrinkles extending orthogonally to a sheet conveyance direction on both the front surface and the rear surface of the flavor generating sheet 10s. The thus formed projections extend orthogonally to the sheet conveyance direction. A pitch between apexes of the projections provided on the rollers is preferably 0.5 to 2.0 mm. Besides, an apex angle is preferably 30 to 70 degrees. The embossing process and the debossing process refer to a process for forming recesses on one surface or both surfaces of the sheet by pressing a pointed working tool against the sheet, and the half cutting process refers to a process for forming, on one surface or both surfaces of the sheet, a notch having a depth sufficiently small not to cut the sheet, preferably a depth equal to or smaller than a half of the thickness of the sheet.

[0027] Alternatively, a plurality of strip-shaped flavor generating sheets may be used as the flavor source 10. A strip-shaped sheet refers to a sheet having a length in a short direction, on a principal surface, smaller than the cross-sectional dimension of the cylindrical container 12. Fig. 3(1) illustrates the outline of this embodiment. In this drawing, a reference sign 10r denotes the strip-shaped flavor generating sheet. The strip-shaped flavor generating sheets 10r are filled with the longitudinal direction aligned substantially in parallel to the longitudinal direction of the cylindrical container 12. Fig. 3(2) is a cross-sectional view of the segment 1s of this embodiment. The strip-shaped flavor generating sheet 10r may be subjected to the surface treatment.

[0028] As a method for producing the tobacco rod, a production method disclosed in Japanese Patent Laid-Open No. 62-272962 is known, and the segment 1s of the present invention can also be produced by the method described in this publication. In the present invention, however, a reconstituted tobacco sheet is preferably used as a sheet material instead of a recycled tobacco material, and as the reconstituted tobacco sheet, a sheet obtained by a papermaking process, a slurry sheet, or a cast sheet is preferably used. Besides, a strip of a sheet material pulled out of a bobbin may be subjected to the surface treatment described in the above paragraph before being caused to pass through cutting means.

2) Preparation of Flavor Generating Sheet 10s

[0029] The flavor generating sheet 10s can be prepared by a known method. The flavor generating sheet 10s can be prepared by a known method of, for example, a papermaking, slurry, or rolling method. Specifically, in employing the papermaking method, it can be produced by a method comprising the following steps: 1) A dried leaf tobacco raw material is coarsely crushed, and the resultant is separated into a water extract and a residue through extraction with water. 2) The water extract is concentrated by vacuum drying. 3) Pulp is added to the residue, and the resultant is fiberized with a refiner, followed by papermaking. 4) A concentrate of the water extract is added to a sheet resulting from the papermaking, and the resultant is dried to obtain a tobacco sheet.

3) Dimension and the like of Flavor Generating Sheet 10s

[0030] The shape of the flavor generating sheet 10s is not limited, and the principal surface of the sheet is preferably in a rectangular shape. The thickness is not limited, and in consideration of highly efficient heat exchange and the strength of a flavor generating segment, is preferably 200 to 600 μm . One side A of the flavor generating sheet 10s preferably has the same length as the length in the longitudinal direction of the cylindrical container 12. The length of the other side B of the flavor generating sheet 10s is appropriately adjusted, and in one embodiment, is 1 to 10 times as long as the length of A.

4) Preparation of Strip-shaped Flavor Generating Sheet 10r

[0031] The strip-shaped flavor generating sheet 10r can be prepared by cutting the flavor generating sheet 10s. A

length a in the longitudinal direction of the strip-shaped flavor generating sheet 10r is preferably the same as the length in the longitudinal direction of the cylindrical container 12. A length b in the short direction of the strip-shaped flavor generating sheet 10r is appropriately adjusted, and in one embodiment, is about 0.4 to 3.0 mm, preferably 0.6 to 2.0 mm, and more preferably 0.8 to 1.5 mm.

5) Aerosol Source

[0032] The flavor source 10 may include an aerosol source. An example of the aerosol source includes polyol such as glycerin, propylene glycol, or 1,3-butanediol. The amount of the aerosol source to be added is preferably 5 to 50% by weight, and more preferably 10 to 30% by weight based on a dry weight of the flavor source 10. The aerosol source included in the flavor source 10 is referred to also as the "internal aerosol source". When containing the internal aerosol source, the tobacco rod 1 is suitably used for the direct heating type flavor inhaler. As described below, the flavor source 10 for the indirect heating type flavor inhaler preferably does not include the internal aerosol source.

(2) Cylindrical Container

[0033] The cylindrical container 12 is made of a known material. For example, a side surface of the cylindrical container 12 is made of a material selected from the group consisting of paper, a resin, a metal, and a combination thereof. When used for the indirect heating type flavor inhaler, the cylindrical container 12 is preferably made of a resin from the viewpoint of handleability. Examples of the resin include polypropylene, polyethylene terephthalate, polyethylene, ABS, and a polylactic acid resin. The thickness of a side surface portion is not limited, and is preferably about 0.4 to 1.0 mm, more preferably about 0.6 to 0.8 mm, and further preferably about 0.7 mm.

[0034] When the cylindrical container 12 is used for the indirect heating type flavor inhaler, its side surface is preferably made of a laminate of paper with a resin film such as a polyethylene film, polyvinyl alcohol, or polylactic acid, a laminate of paper with a thin layer formed by coating a solution of a polysaccharide/mucopolysaccharide, such as alginic acid, carrageenan, carboxymethyl cellulose, xanthan gum, guar gum, pectin, mannose, glucuronic acid, locust bean gum, gellan gum, starch, oxidized starch, processed starch, hyaluronic acid, or chondroitin sulfate, a laminate of paper with a metal foil such as an aluminum foil, or cardboard. The number of layers in the laminate is not limited, and a three-layer structure of a paper layer/a resin layer (or a metal foil layer, or a polysaccharide/mucopolysaccharide layer)/a paper layer is preferably employed. Since the paper layer is exposed in such a laminate, it can be sufficiently adhered with a vinyl acetate adhesive or a hot melt adhesive when wound. At this point, sufficient peel strength (22.4 g to 28.0 g) can be attained, and adhesive peeling otherwise caused after winding can be reduced. An example of the paper includes Sandwich Laminate #85/S52 manufactured by Nippon Paper Papyrus Co., Ltd. (thickness: 220 μm , basis weight: 85/52 gsm, stiffness: 145 $\text{cm}^3/100$). The thickness of the resin layer is preferably 12 to 70 μm , and more preferably 17 to 20 μm .

[0035] The cardboard has permeability of preferably less than 50 coresta units, more preferably less than 15 coresta units, and further preferably less than 1 coresta unit. The thickness is preferably 100 to 150 μm , and the basis weight is preferably about 80 to 150 gsm. The cardboard can be one containing 87.5% by weight of kraft pulp, 5% by weight of an inorganic filler, 0.5% by weight of starch, and about 7% by weight of moisture. Such cardboard is available from, for example, Julius Glatz GmbH.

[0036] From the viewpoint of satisfactorily improving the volatilization property of the flavor component, the side surface of the cylindrical container 12 has permeability of preferably less than 1 coresta unit, and more preferably 0 coresta unit. A coresta unit refers to air flow volume (cm^3) per cm^2 and per minute under a condition of 100 mm H_2O . The permeability can be measured using an permeability meter PPM100 manufactured by FILTRONA, USA.

[0037] One end or both ends of the cylindrical container 12 may be opened, or may be closed with retaining the permeability. If the end is closed, the end is preferably made of the above-described material. The dimension of the cylindrical container 12 is appropriately adjusted to attain the above-described dimension of the tobacco rod 1. The cylindrical container 12 may be continuous over a plurality of segments 1s.

2. Direct Heating Type or Indirect Heating Type Flavor Inhaler

(1) Direct Heating Type Flavor Inhaler

[0038] The direct heating type flavor inhaler refers to an article that generates a flavor by heating the flavor source 10. Fig. 4 illustrates one embodiment of the direct heating type flavor inhaler. In this drawing, a reference sign 100 denotes the direct heating type flavor inhaler, the reference sign 1 denotes the tobacco rod, a reference sign 2 denotes a mouthpiece, a reference sign 20 denotes a cooling portion, a reference sign 22 denotes a filter, and a reference sign 3 denotes a wrapper.

[0039] The mouthpiece is not limited in the dimension, and preferably has the same width as the tobacco rod 1, and

channels for causing a flavor component to pass therethrough.

Step 2: The precursor is cut in a direction vertical to the longitudinal direction to prepare two or more of the segments described above.

Step 3: One or more of the segments are rotated in a circumferential direction around a longitudinal direction axis.

[0048] The outline of the production method is illustrated in Fig. 8. In Fig. 8, a reference sign 1' denotes the precursor, a reference sign Y denotes the longitudinal direction axis, and a reference sign Z denotes a cut position.

(1) Step 1

[0049] The precursor can be prepared in the same manner as the segment 1s.

(2) Step 2

[0050] In this step, the precursor 1' is cut in the direction vertical to the longitudinal direction. For example, the precursor 1' is cut in the positions Z in Fig. 8.

(3) Step 3

[0051] In this step, one or more of the segments are rotated in the circumferential direction around the longitudinal direction axis. The longitudinal direction axis refers to an axis passing through the centers of a front edge surface and a rear edge surface. The angle of the rotation is not limited as long as discontinuously connected channels can be formed. For example, Fig. 8 illustrates an embodiment in which the center segment is rotated in the circumferential direction by about 30 degrees.

Examples

[Example 1]

[0052] A tobacco sheet obtained by a papermaking process (thickness: 200 μm , basis weight: 71 g/m^2 , nicotine amount: 1.4% by weight) was treated with an alkaline aqueous solution of pH 9.6. The thus prepared flavor generating sheet was cut into a square shape having a side of 21 mm, and a weight of 310 mg.

[0053] As a cylindrical container, a polypropylene straw having a diameter of 8 mm, a wall thickness of 0.2 mm, and a length of 21 mm was provided. The cut flavor generating sheet was folded and filled within the straw to prepare a precursor. The precursor had a cross-section in a shape as illustrated in Fig. 2(1). Subsequently, the precursor was cut, vertically to the longitudinal direction, into three equal portions to obtain three segments. The center segment was rotated in the circumferential direction around a central axis in the longitudinal direction by 120 degrees. Thereafter, the three segments were connected to one another by winding these with one piece of tipping paper, and thus, a tobacco rod including three segments was produced.

[0054] Referring to the description of International Publication No. WO2016/075749, the indirect heating type flavor inhaling system illustrated in Fig. 6 was provided. The length of the cartridge 201 was 21 mm, which was the same as that of the tobacco rod 1. The system was used to perform machine smoking of 20 puffs. A sample was prepared in accordance with the humidity controlling/conditioning method for tobacco and tobacco products defined by ISO (the International Organization for Standardization) 3402: 1999 (Non Patent Literature). A machine smoking method and a method for collecting a generated aerosol were performed in accordance with CORRESTA RECOMMENDED METHOD No. 81 "ROUTINE ANALYTICAL MACHINE FOR E-CIGARETTE AEROSOL GENERATION AND COLLECTION - DEFINITIONS AND STANDARD". A Cambridge filter in which the aerosol had been trapped was collected to measure a nicotine amount by gas chromatography. A Cambridge filter is a flat circular glass fiber filter having a diameter of about 44 mm and a thickness of 1.5 mm, and is known to and widely used by those skilled in the art as a filter capable of trapping a particulate matter. The Cambridge filter is available from Cambridge Filter Japan, Ltd., Borgwalt (Catalog No. 8020 285 2) and the like. As a representative of flavor components contained in the particulate matter (total particle matter, hereinafter referred to as the "TPM") of the thus trapped aerosol, nicotine was analyzed to obtain a nicotine amount in the TPM. Quantitative determination of nicotine was performed by a method commonly employed by those skilled in the art.

[Example 2]

[0055] A precursor was prepared in the same manner as in Example 1. Subsequently, the precursor was cut into five

equal portions to obtain five segments. The second and fourth segments were rotated in the circumferential direction around the central axis in the longitudinal direction by 72 degrees, and thus, a tobacco rod including five segments was prepared. This tobacco rod was evaluated in the same manner as in Example 1.

[Example 3]

[0056] A tobacco sheet obtained by a papermaking process, which was the same as that used in Example 1, was provided. Subsequently, the resultant sheet was subjected to a surface treatment using a crimping roller. As the crimping roller, a chevron roller (60 degrees, 1 mm pitch) was used. In this manner, a flavor generating sheet was prepared. The flavor generating sheet was cut into a square shape having a side of 21 mm, and a weight of 310 mg. The thus cut sheet was used to produce a tobacco rod including five segments in the same manner as in Example 3, and the resultant was evaluated.

[Comparative Examples 1 and 2]

[0057] Tobacco rods respectively including one and five segments were produced in the same manner as in Examples 1 and 3 except that the precursor was directly used as a tobacco rod without cutting, and the resultants were evaluated. Results are shown in Table 1 and Fig. 9.

[Table 1]

	Number of Segments	Nic/TPM mg/20 puff	
		not crimped	crimped
Comparative Example 1	1	0.68	
Example 1	3	1.02	
Example 2	5	1.24	
Comparative Example 2	1		1.49
Example 3	5		1.75

[0058] As shown in Table 1, the tobacco rods of the examples had higher values, than those of the comparative examples, of a ratio of the flavor component contained in the particulate matter of the aerosol generated from the tobacco rod. It is thus obvious that the tobacco rod of the present invention has an excellent volatilization property for a flavor component.

REFERENCE SIGNS LIST

[0059]

1 tobacco rod
1s segment

1c channel
10 flavor source including tobacco
10s flavor generating sheet
10r strip-shaped flavor generating sheet
12 cylindrical container
100 direct heating type flavor inhaler
2 mouthpiece
20 cooling portion
22 filter
3 wrapper
200 indirect heating type flavor inhaler
210 indirect heating type flavor inhaling system
201 cartridge
4 atomizing portion

5 external aerosol source
 6 passage
 7 outer frame
 203 power supply unit

1' precursor
 Y longitudinal direction axis
 Z cut position

Claims

1. A tobacco rod for a flavor inhaler, comprising a plurality of rod-shaped segments connected to one another,
 wherein each of the segments includes a cylindrical container and a flavor source including tobacco filled in the cylindrical container, the flavor source being filled in such a manner as to form, over a longitudinal direction, a channel for causing a flavor component to pass therethrough, and the channels of the segments are discontinuously connected at the connecting portion.
2. The tobacco rod according to claim 1, wherein the tobacco rod is for use in a direct heating type or indirect heating type flavor inhaler.
3. The tobacco rod according to any one of claims 2 to 4, wherein the flavor source comprises a surface-treated flavor generating sheet.
4. The tobacco rod according to claim 2 or 3, wherein a side surface of the cylindrical container is made of a material selected from the group consisting of paper, a resin, a metal, and a combination thereof.
5. The tobacco rod according to any one of claims 2 to 4, wherein the side surface of the cylindrical container has a multilayer structure.
6. The tobacco rod according to any one of claims 2 to 5, wherein the side surface of the cylindrical container has a permeability of less than 1 coresta unit.
7. The tobacco rod according to any one of claims 2 to 6, wherein the flavor source comprises a plurality of strip-shaped flavor generating sheets, and a longitudinal direction of the sheets is substantially parallel to the longitudinal direction of the cylindrical container.
8. The tobacco rod according to any one of claims 2 to 7, wherein the flavor source comprises an aerosol source that generates aerosol.
9. A method for producing the tobacco rod according to any one of claims 1 to 8, comprising:
 - a step of providing a precursor including a cylindrical container and a flavor source including tobacco filled in the cylindrical container, the flavor source being filled in such a manner as to form, over a longitudinal direction, a channel for causing a flavor component to pass therethrough;
 - a step of preparing two or more of the segments by cutting the precursor in a direction vertical to the longitudinal direction; and
 - a step of rotating one or more of the segments in a circumferential direction around a longitudinal direction axis.
10. A direct heating type or indirect heating type flavor inhaler, comprising the tobacco rod according to any one of claims 1 to 8.
11. The flavor inhaler according to claim 10, further comprising an aerosol source that generates aerosol on an upstream side of the tobacco rod.
12. An ultrasonic vibration type flavor inhaler, comprising the tobacco rod according to claim 1.

Fig. 1

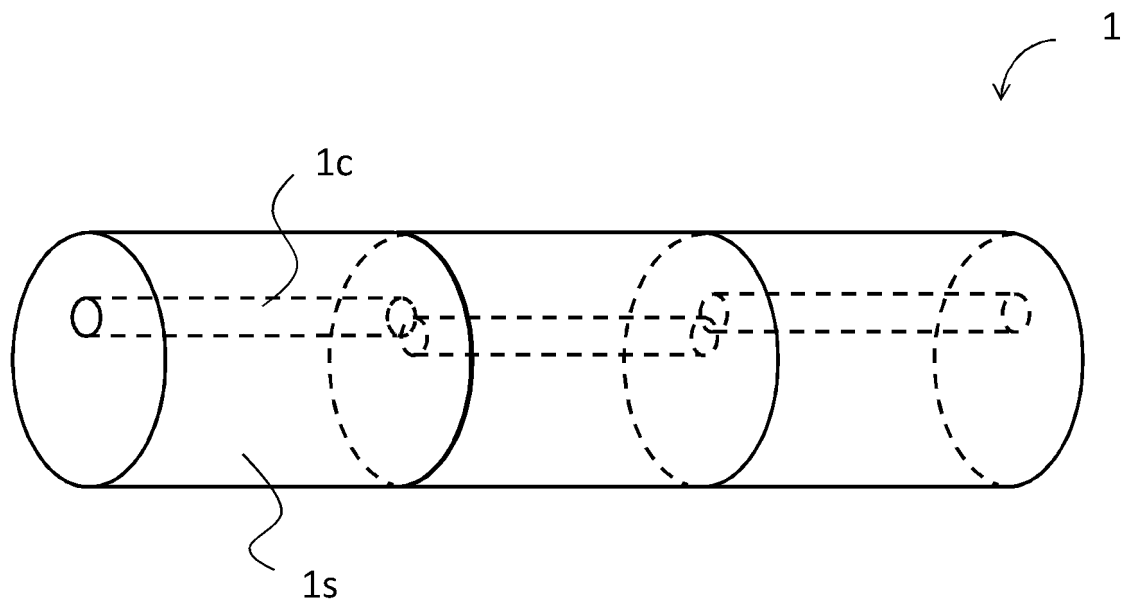


Fig. 2

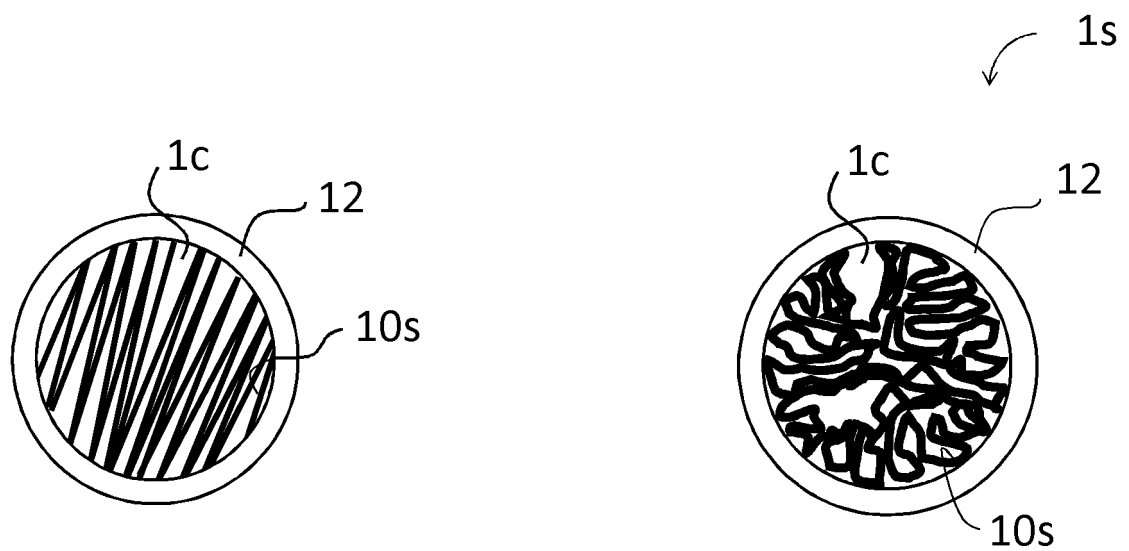


Fig. 5

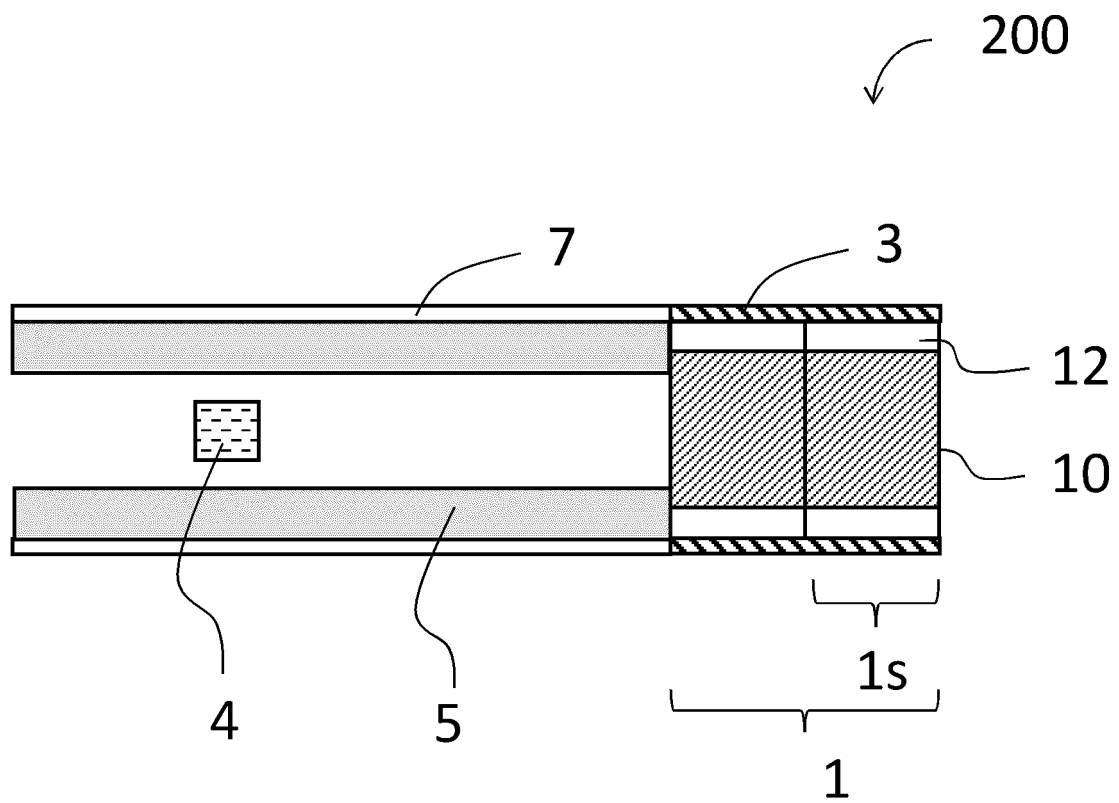


Fig. 6

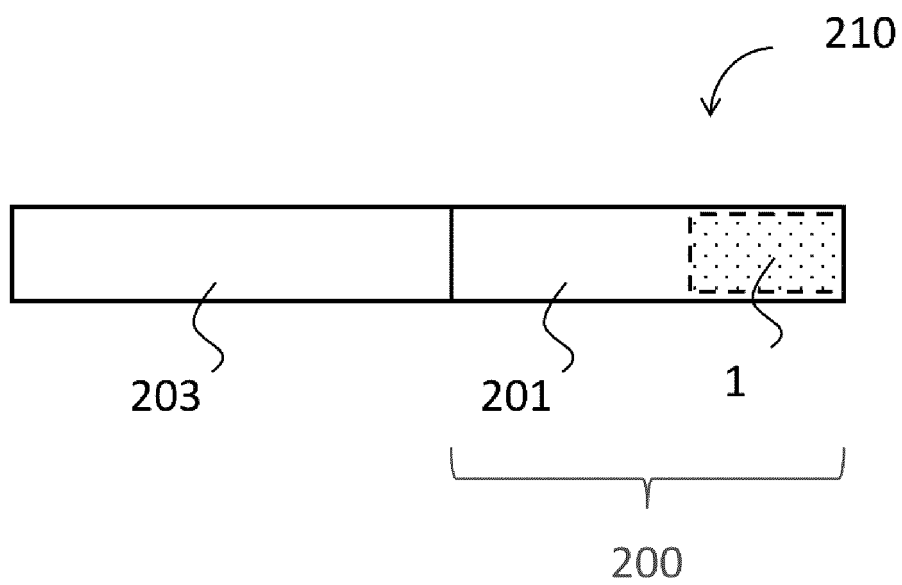


Fig. 7

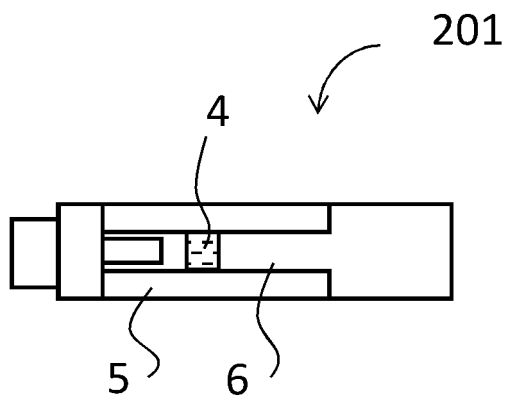


Fig. 8

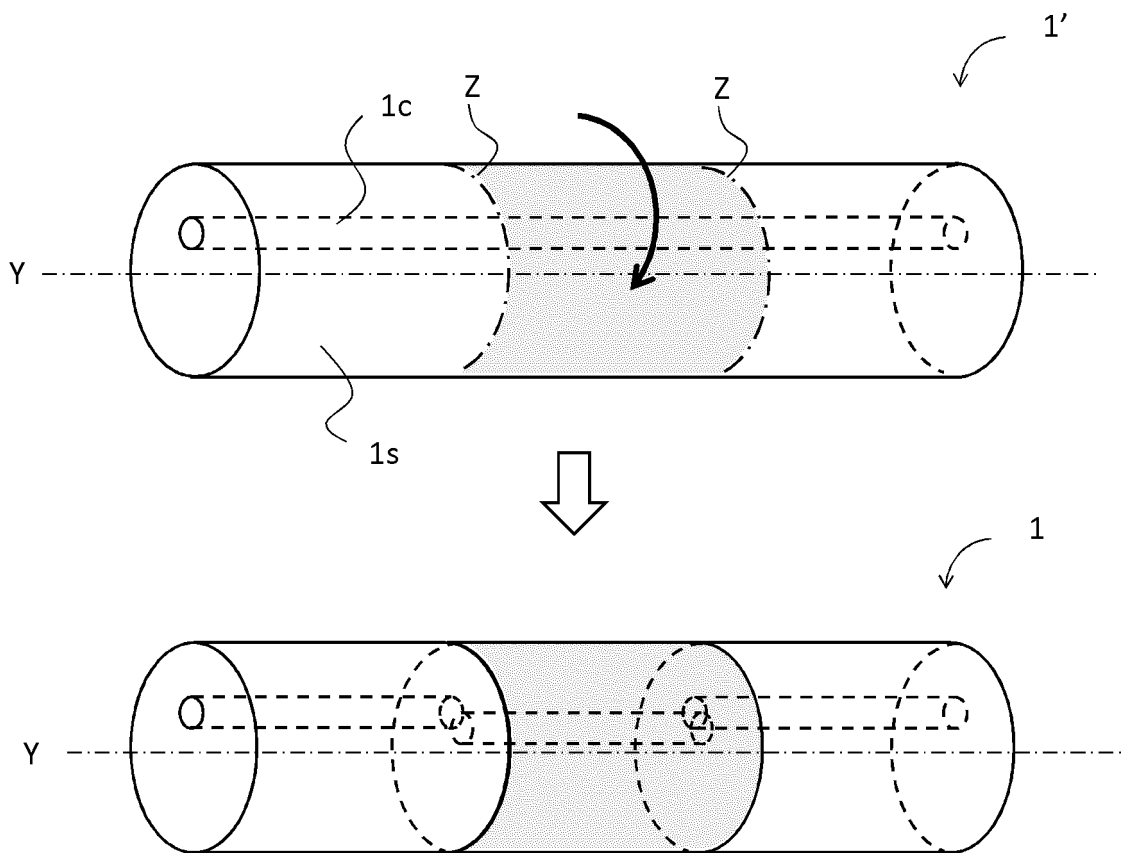
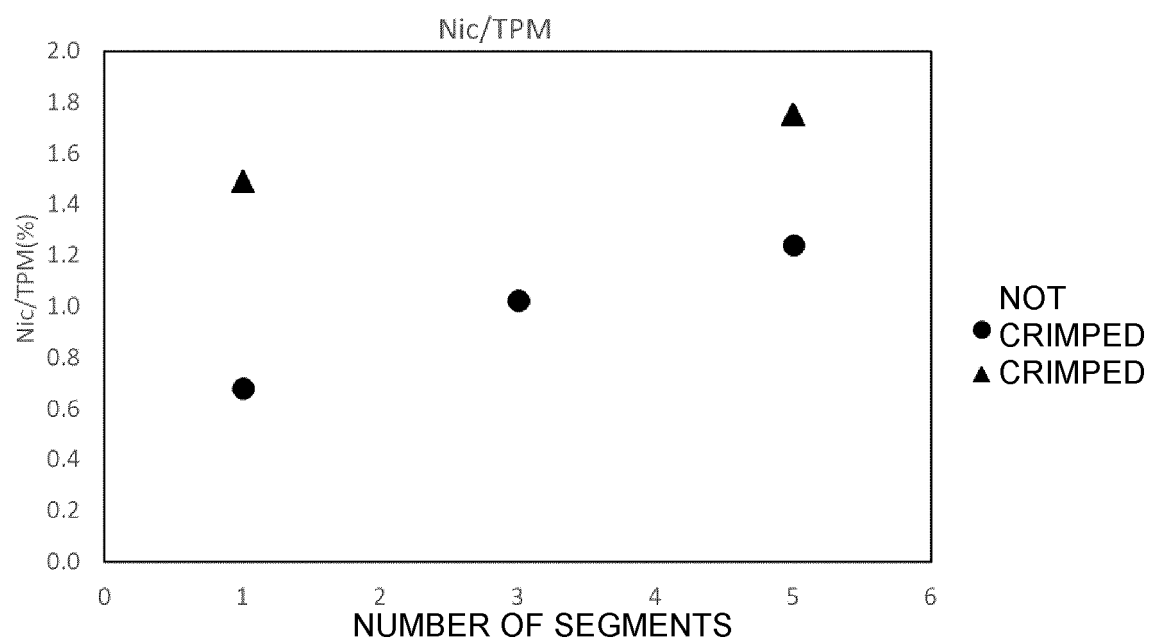


Fig. 9



INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2019/019659

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2-2586 B2 (BRITISH-AMERICAN TOBACCO CO. LTD.) 18 January 1990, column 4, line 25 to column 8, line 32, fig. 1-6 & US 4416295 A, column 1, line 31 to column 4, line 53, fig. 1-6 & DE 3141008 A1	1-12
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