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(54) **FLAVOR GENERATION ARTICLE**

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(57) **ABSTRACT**

Provided is a flavor generating article comprising a susceptor-containing sheet which is flat and contains a susceptor material and a first sheet and a second sheet each of which has a wave shape and which are arranged on both sides of the susceptor-containing sheet. At least one of the susceptor-containing sheet, the first sheet, and the second sheet contains tobacco.

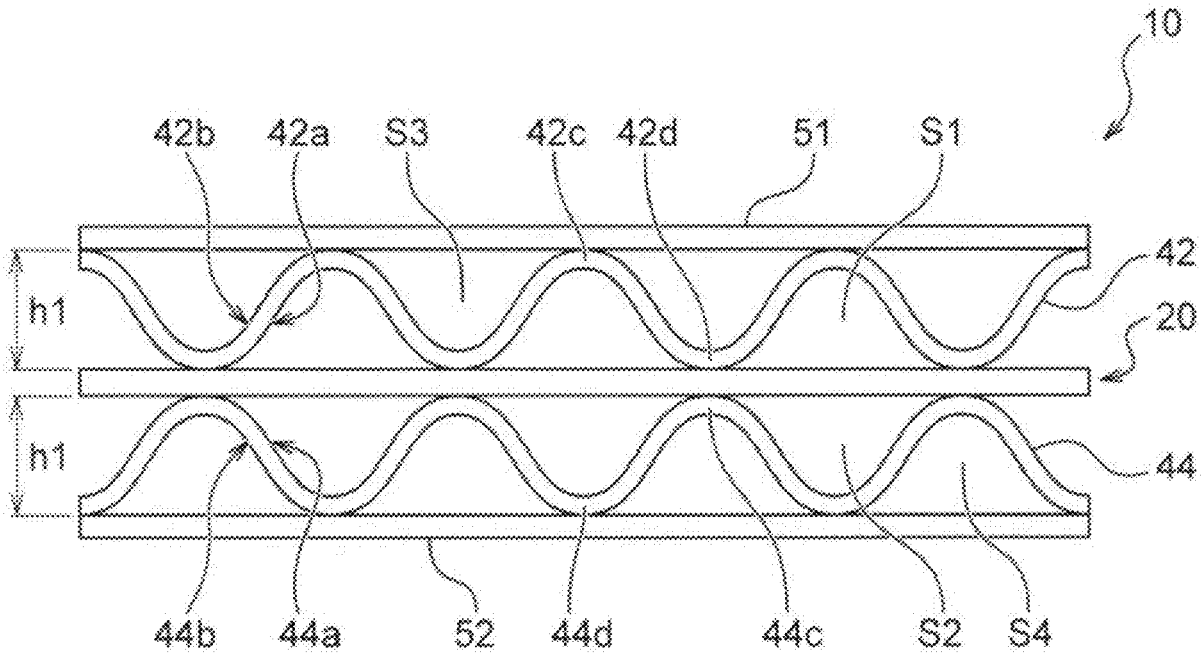


Fig. 1

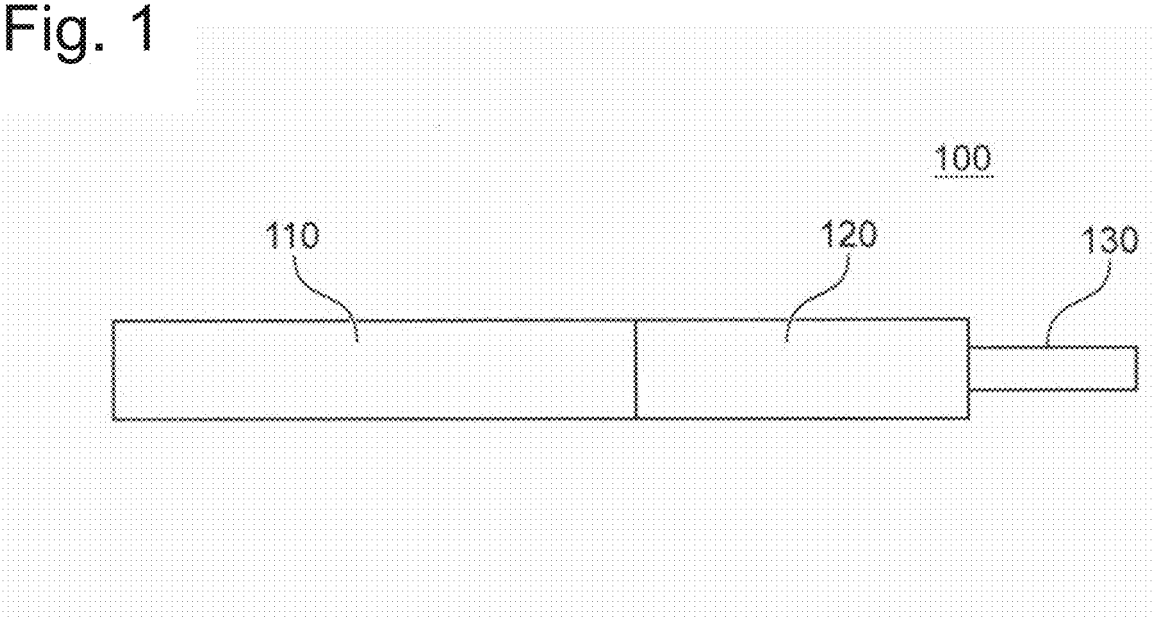


Fig. 2

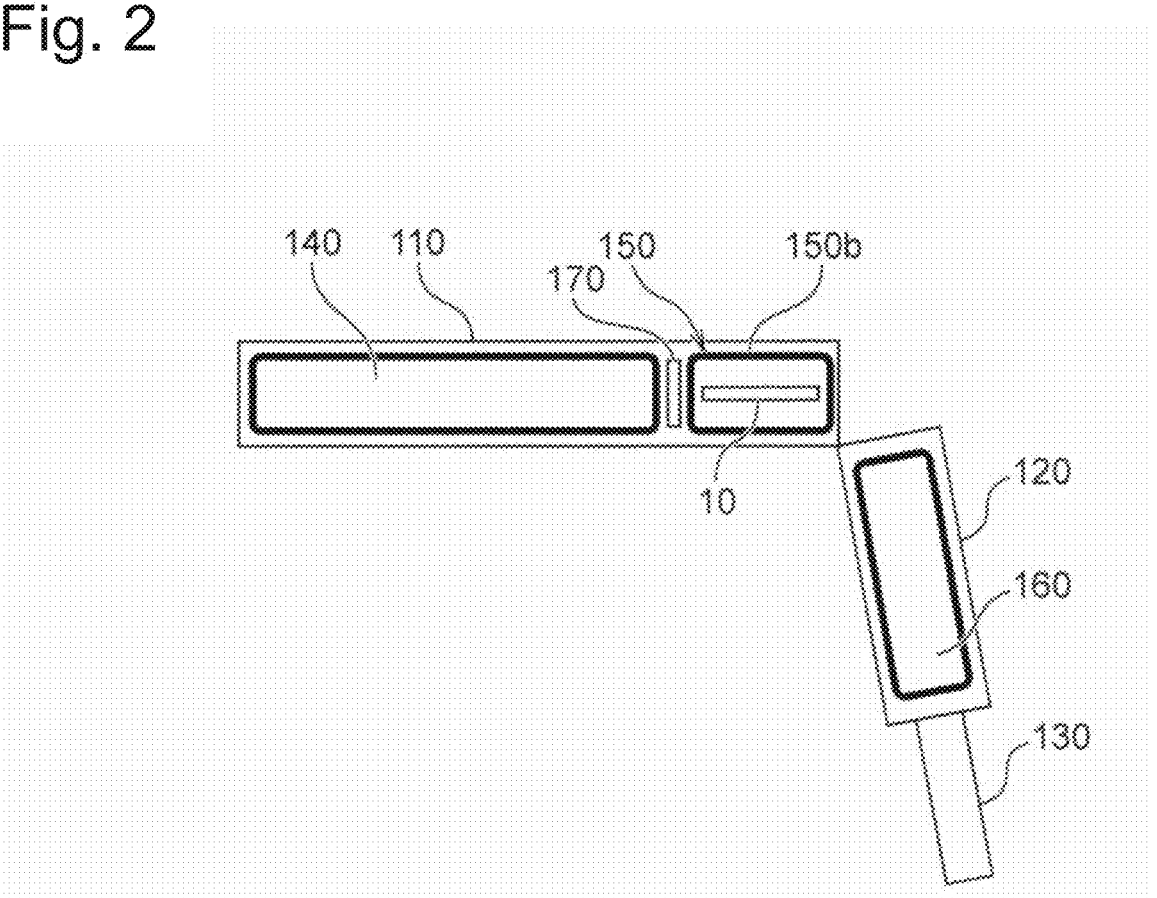


Fig. 3

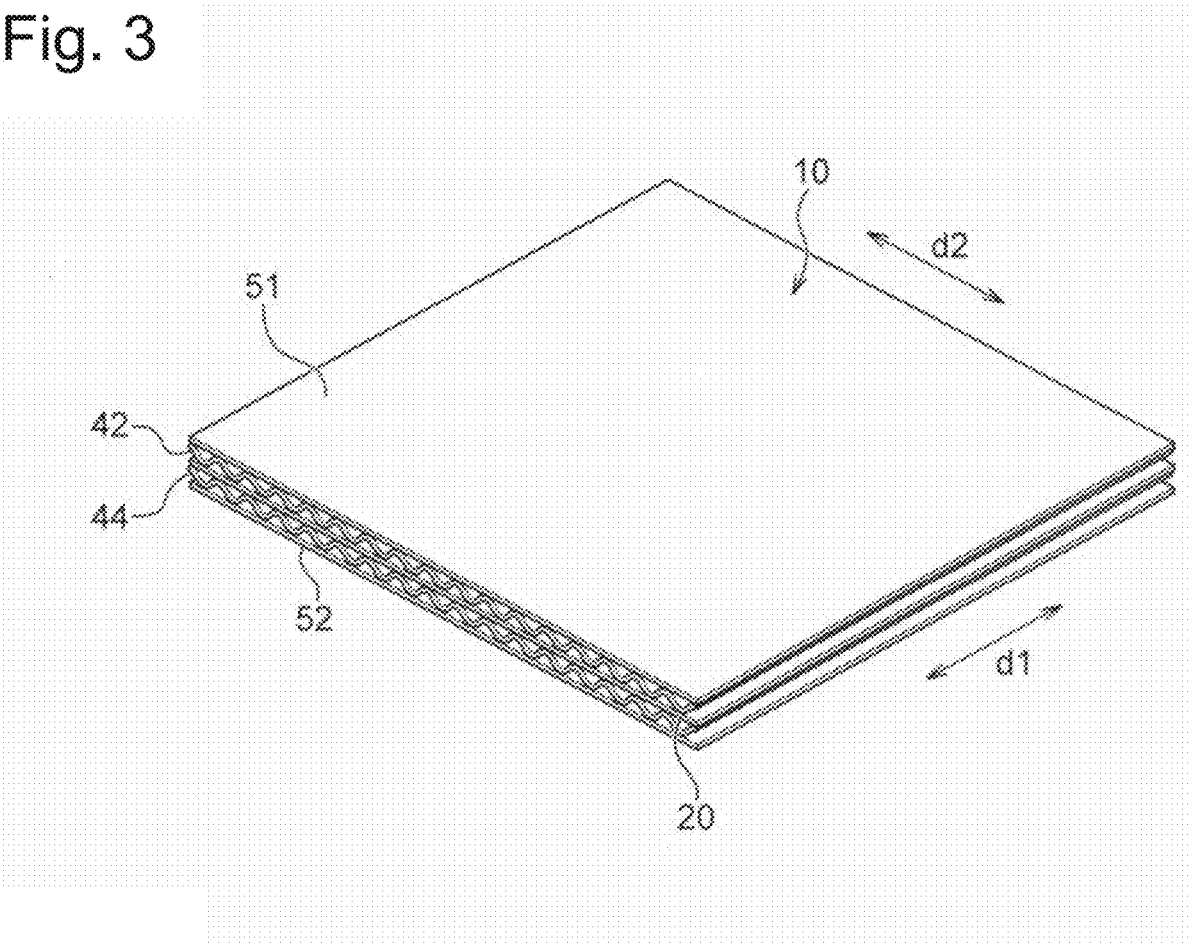

10
d2
51
42
44
52
d1
20

Fig. 4

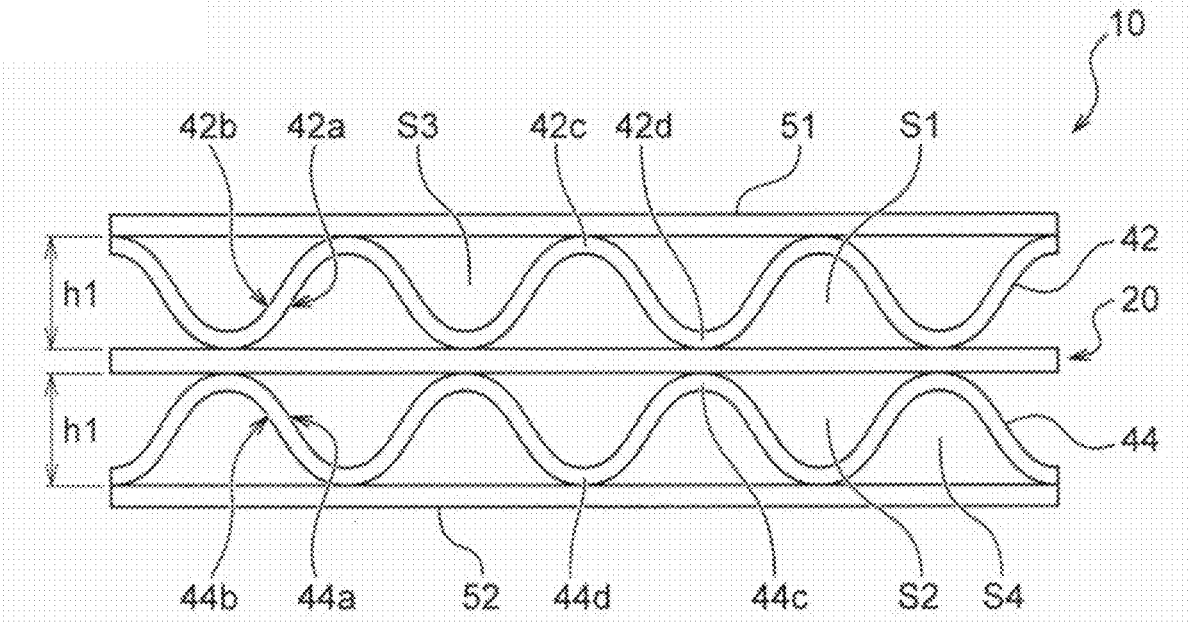

10
42b
42a
S3
42c
42d
51
S1
42
h1
20
h1
44
44b
44a
52
44d
44c
S2
S4

Fig. 5

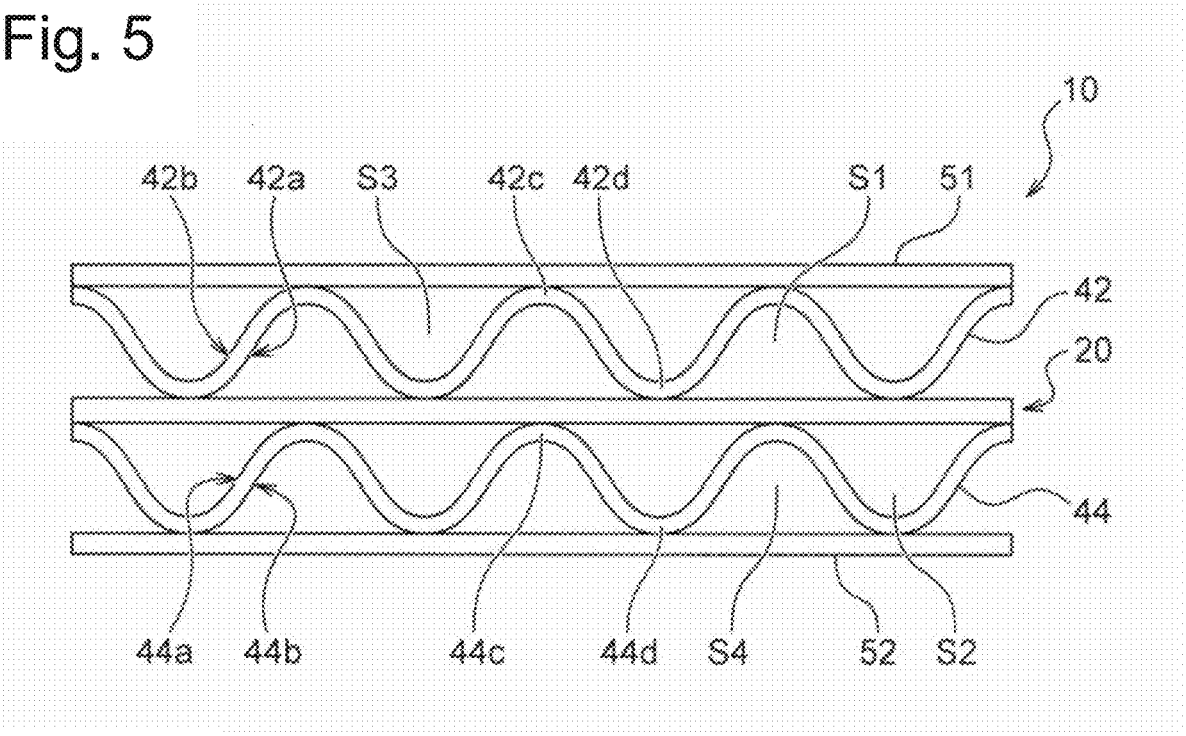

10
42b
42a
S3
42c
42d
S1
51
42
20
44
44a
44b
44c
44d
S4
52
S2

Fig. 6A

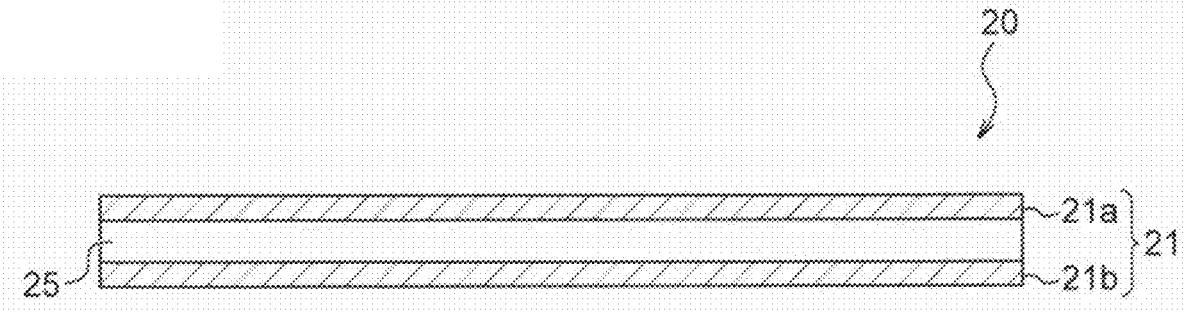

20
21a
21
25
21b

Fig. 6B

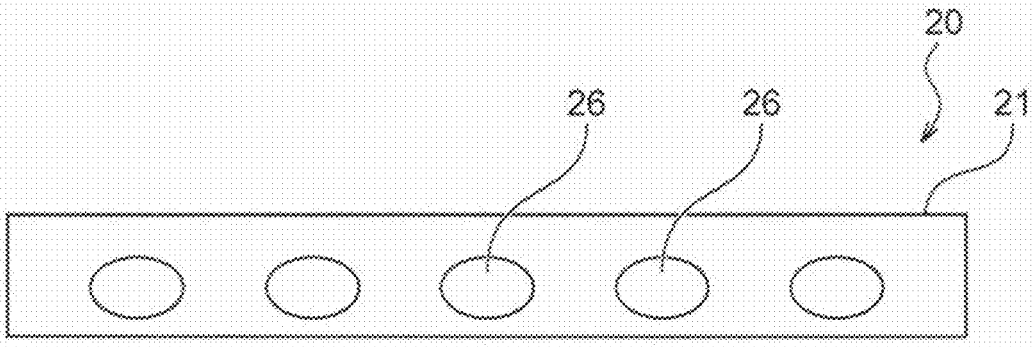


Fig. 7A

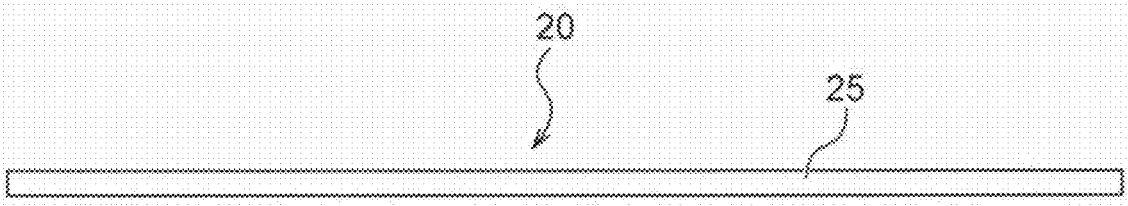
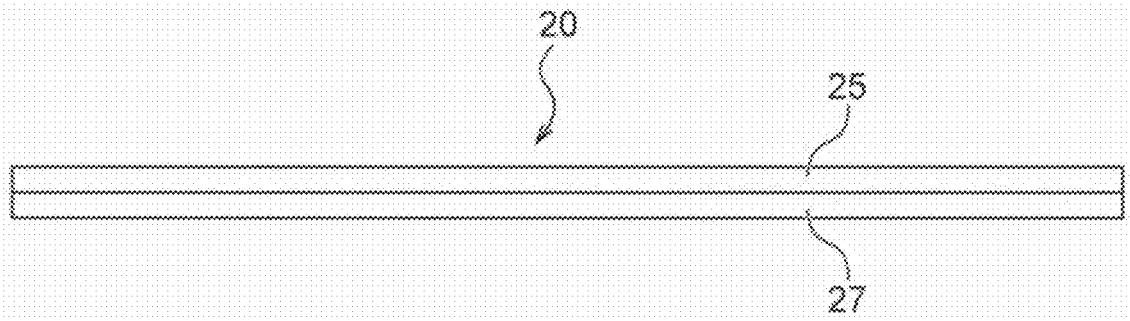


Fig. 7B



FLAVOR GENERATION ARTICLE

CROSS-REFERENCE TO RELATED APPLICATION

[0001] The present invention contains subject matter related to PCT Application No. PCT/JP2022/034709 filed on Sep. 16, 2022, the entire contents of which are incorporated herein by reference.

TECHNICAL FIELD

[0002] The present invention relates to a flavor generating article.

BACKGROUND ART

[0003] Flavor inhalers for inhaling flavors, etc. without burning of materials are conventionally known. Smoking material heating devices, which heat a smoking material comprising tobacco that contains volatile components to form an aerosol, are known as an example of such flavor inhalers. A consumable comprising a tobacco slab, a spacer, and a filter is known as such a smoking material (see PTL 1).

CITATION LIST

Patent Literature

[0004] PTL 1: WO 2019/162497 A1

SUMMARY OF INVENTION

Technical Problem

[0005] The objective of the present invention lies in providing a cartridge having a novel structure, and a flavor inhaler.

Solution to Problem

[0006] According to a first aspect, a flavor generating article is provided. The flavor generating article comprises: a flat susceptor-containing sheet comprising a susceptor material; and a waveform first sheet and second sheet which are disposed on both sides of the susceptor-containing sheet, and at least one of the susceptor-containing sheet, the first sheet and the second sheet contains tobacco.

[0007] According to a first embodiment, gaps for the passage of a flavor or aerosol generated from the tobacco can be formed between the susceptor-containing sheet and the first sheet and second sheet. This enables efficient downstream delivery of the flavor or aerosol generated from the tobacco. Furthermore, the susceptor-containing sheet comprises the susceptor material, and the tobacco can therefore be heated without a heating source coming into contact with the flavor generating article. The flavor or aerosol can therefore be stably delivered because the gaps are not crushed as a result of a heater or the like contacting the flavor generating article. In addition, the susceptor-containing sheet which comprises the susceptor material is arranged in such a way as to be sandwiched between the first sheet and the second sheet, so transmission of heat generated by the susceptor material to a surface of the flavor generating article can be inhibited by the gaps through which the flavor or aerosol passes. As a result, it is possible to eliminate the need for a complex insulating mechanism in a flavor inhaler.

[0008] The essential point of a second aspect, which is in accordance with the first aspect, lies in the fact that the tobacco comprises an aerosol source.

[0009] According to the second aspect, the amount of aerosol delivered to a user can be increased.

[0010] The essential point of a third aspect, which is in accordance with the first or second aspect, lies in the fact that the first sheet comprises a first face facing the susceptor-containing sheet, and a second face opposite the first face, a liner sheet being provided on the second face.

[0011] According to the third aspect, the first sheet is covered by the liner sheet, so the user can handle the flavor generating article without touching the first sheet directly. This inhibits crushing of the first sheet, and the gap between the susceptor-containing sheet and the first sheet can therefore be maintained so that the flavor or aerosol can be stably delivered. The liner sheet may furthermore inhibit transmission of heat from the susceptor-containing sheet to the user's hand when the flavor generating article is removed from the flavor inhaler after use of the flavor generating article.

[0012] The essential point of a fourth aspect, which is in accordance with the third aspect, lies in the fact that the liner sheet is paper.

[0013] According to the fourth aspect, a lightweight and inexpensive flavor generating article can be provided.

[0014] The essential point of a fifth aspect, which is in accordance with the third or fourth aspect, lies in the fact that a gap between the first sheet and the liner sheet is partially or completely closed.

[0015] According to the fifth aspect, the passage of air through the gap between the first sheet and the liner sheet is inhibited. This makes it easier for air passing through the flavor generating article to flow through the gaps between the susceptor-containing sheet and the first sheet and second sheet, which therefore enables efficient downstream delivery of the flavor or aerosol generated from the tobacco.

[0016] The essential point of a sixth aspect, which is in accordance with any of the first to fifth aspects, lies in the fact that at least one of the first sheet and the second sheet comprises paper or molded pulp.

[0017] According to the sixth aspect, a lightweight, inexpensive and robust flavor generating article can be provided.

[0018] The essential point of a seventh aspect, which is in accordance with any of the first to sixth aspects, lies in the fact that the height of wave portions of at least one of the first sheet and the second sheet is 0.2 mm to 2.0 mm.

[0019] If the height of the wave portions is less than 0.2 mm, then the gaps between the susceptor-containing sheet and at least one of the first sheet and second sheet will be excessively small, so there is a risk that efficient downstream delivery of the flavor or aerosol generated from the tobacco will no longer be possible. Furthermore, in that case, there is also a risk of a reduction in heat insulation afforded by the gaps between the susceptor-containing sheet and at least one of the first sheet and second sheet. If the height of the wave portions is greater than 2.0 mm, then the flavor generating article will be excessively large in size. According to the seventh aspect, the flavor or aerosol can therefore be efficiently delivered and the size of the flavor generating article can be limited.

[0020] The essential point of an eighth aspect, which is in accordance with any of the first to seventh aspects, lies in the fact that the height of wave portions of the first sheet and the height of wave portions of the second sheet are different.

[0021] According to the eighth aspect, the gap between the susceptor-containing sheet and the first sheet, and the gap between the susceptor-containing sheet and the second sheet can be made different sizes. Accordingly, when a structure is formed by laminating a first tobacco sheet and a second tobacco sheet comprising different tobacco flavours, for example, a first flavor from the first tobacco sheet is made to pass through a first gap and a second flavor from the second tobacco sheet is made to pass through a second gap, whereby the desired flavor can be supplied to the user by adjusting respective delivery amounts thereof.

[0022] The essential point of a ninth aspect, which is in accordance with any of the first to eighth aspects, lies in the fact that the width of wave portions of at least one of the first sheet and the second sheet is 0.2 mm to 2.0 mm.

[0023] If the width of the wave portions is less than 0.2 mm, then there is a risk of an undesirable increase in suction resistance when the aerosol passes between waves before being inhaled. If this width is greater than 2.0 mm, then there is a risk of a reduction in strength of the flavor generating article. According to the ninth aspect, the strength of the flavor generating article can therefore be maintained while an undesirable increase in suction resistance is suppressed.

[0024] The essential point of a 10th aspect, which is in accordance with any of the first to ninth aspects, lies in the fact that at least one of the first sheet and the second sheet comprises a flavoring material.

[0025] According to the 10th aspect, the flavoring material can be supplied to the user in addition to the flavor or aerosol.

[0026] The essential point of an 11th aspect, which is in accordance with any of the first to 10th aspects, lies in the fact that the susceptor-containing sheet extends only partly in a longitudinal direction or a width direction of the flavor generating article.

[0027] According to the 11th aspect, the susceptor-containing sheet has a smaller length or width than the overall length or width of the flavor generating article. Accordingly, the flavor generating article does not need to be provided with a susceptor-containing sheet having the same size as the overall size of the flavor generating article, so the required amount of susceptor-containing sheet can be provided for the flavor generating article and the amount of susceptor material can be reduced.

[0028] The essential point of a 12th aspect, which is in accordance with any of the first to 11th aspects, lies in the fact that the susceptor-containing sheet comprises the susceptor material in sheet-form, and a tobacco sheet laminated on the sheet-form susceptor material.

[0029] According to the 12th aspect, the tobacco sheet can be heated by means of induction heating of the sheet-form susceptor material.

[0030] The essential point of a 13th aspect, which is in accordance with the 12th aspect, lies in the fact that the sheet-form susceptor material has a smaller area than the tobacco sheet.

[0031] According to the 13th aspect, a smaller amount of the susceptor material can be used.

[0032] The essential point of a 14th aspect, which is in accordance with the 12th or 13th aspect, lies in the fact that the tobacco sheet comprises a first tobacco sheet and a second tobacco sheet, and the sheet-form susceptor material is sandwiched between the first tobacco sheet and the second tobacco sheet.

[0033] According to the 14th aspect, the first tobacco sheet and the second tobacco sheet can be heated more evenly by means of induction heating of the sheet-form susceptor material.

[0034] The essential point of a 15th aspect, which is in accordance with the 14th aspect, lies in the fact that the first tobacco sheet and the second tobacco sheet differ from each other in regard to at least one of flavor, thickness, aerosol source content and surface shape.

[0035] According to the 15th aspect, different flavours can be generated from the first tobacco sheet and the second tobacco sheet when the flavours therein are different. Accordingly, the desired flavor can be supplied to the user by adjusting respective delivery amounts of the flavours. Furthermore, when the thicknesses are different, the temperature of the relatively thin tobacco sheet rises more rapidly, enabling efficient initial delivery of the flavor or aerosol. In contrast to this, the temperature of the relatively thick tobacco sheet rises more slowly, making it possible to maintain flavor or aerosol generation to the latter stage of smoking. When the aerosol source contents are different, the temperature of the tobacco sheet having a relatively small aerosol source content rises more rapidly, enabling efficient initial delivery of the flavor or aerosol. In contrast to this, the temperature of the tobacco sheet having a relatively large aerosol source content rises more slowly, making it possible to maintain flavor or aerosol generation to the latter stage of smoking. Furthermore, when the tobacco sheets have different surface shapes, the tobacco sheet with the relatively large surface area enables efficient initial delivery of the flavor or aerosol. In contrast to this, the temperature of the tobacco sheet having a relatively small surface area rises more slowly, making it possible to maintain flavor or aerosol generation to the latter stage of smoking.

[0036] The essential point of a 16th aspect, which is in accordance with any of the first to 11th aspects, lies in the fact that the susceptor-containing sheet comprises a tobacco sheet and a granular susceptor material.

[0037] According to the 16th aspect, the tobacco sheet can be heated by means of induction heating of the granular susceptor material.

[0038] The essential point of the 17th aspect, which is in accordance with any of the 12th to 16th aspects, lies in the fact that the thickness of the tobacco sheet is 0.25 mm to 4.0 mm.

[0039] If the thickness of the tobacco sheet is less than 0.25 mm, then there is a risk of a reduction in the amount of flavor or aerosol generated per unit area of the sheet. If the thickness of the tobacco sheet is greater than 4.0 mm, then the flavor generating article will be excessively large in size. In that case, it takes time to heat the tobacco sheet, and there is a risk of more time being needed until the first puff, and of the amount delivered by the first puff being inadequate. According to the 17th aspect, it is therefore possible to generate sufficient flavor or aerosol and also to limit the size of the flavor generating article.

[0040] The essential point of an 18th aspect, which is in accordance with any of the first to 11th aspects, lies in the fact that the susceptor-containing sheet consists only of the susceptor material, or comprises the susceptor material in sheet-form and a non-tobacco sheet laminated on the sheet-form susceptor material.

[0041] According to the 18th aspect, the susceptor-containing sheet does not contain tobacco, and at least one of the

first sheet and the second sheet therefore contains the tobacco. As a result, the tobacco contained in at least one of the first sheet and the second sheet can be heated by induction heating of the susceptor-containing sheet, and the flavor or aerosol can be produced.

[0042] The essential point of a 19th aspect, which is in accordance with any of the first to 18th aspects, lies in the fact that at least one of the first sheet and the second sheet contains the tobacco.

[0043] According to the 19th aspect, the tobacco contained in at least one of the first sheet and the second sheet can be heated by induction heating of the susceptor-containing sheet, and the flavor or aerosol can be produced.

[0044] The essential point of the 20th aspect, which is in accordance with any of the first to 19th aspects, lies in the fact that at least one of the first sheet and the second sheet is a non-tobacco sheet.

[0045] According to the 20th aspect, at least one of the first sheet and the second sheet is formed by any non-tobacco material, and a lightweight, inexpensive and robust flavor generating article can therefore be provided.

BRIEF DESCRIPTION OF DRAWINGS

[0046] FIG. **1** is a schematic side view of a flavor inhaler for heating a flavor generating article according to the embodiment.

[0047] FIG. **2** is a schematic diagram of an example of the flavor inhaler.

[0048] FIG. **3** is an oblique view of the flavor generating article.

[0049] FIG. **4** is a view in cross section seen from a longitudinal direction of the flavor generating article shown in FIG. **3**.

[0050] FIG. **5** is a view in cross section seen from the longitudinal direction of a flavor generating article according to another embodiment.

[0051] FIG. **6**A is a view in cross section showing the configuration of a susceptor-containing sheet in the flavor generating article according to the embodiment.

[0052] FIG. **6**B is a view in cross section showing the configuration of the susceptor-containing sheet in a flavor generating article according to another embodiment.

[0053] FIG. **7**A is a view in cross section showing the configuration of the susceptor-containing sheet in a flavor generating article according to another embodiment.

[0054] FIG. **7**B is a view in cross section showing the configuration of the susceptor-containing sheet in a flavor generating article according to yet another embodiment.

DESCRIPTION OF EMBODIMENTS

[0055] Embodiments of the present invention will be described below with reference to the drawings. In the drawings described below, identical or corresponding components are assigned the same reference numbers and duplicate descriptions will not be given. It should be noted that "longitudinal direction" in the present specification means the direction in which air passes through the flavor generating article. Alternatively, "longitudinal direction" means the direction of extension of projections and depressions in a first sheet or second sheet which will be described later. Furthermore, "short-side direction" or "width direction" in the present specification means a direction orthogonal to the longitudinal direction.

[0056] FIG. **1** is a schematic side view of a flavor inhaler for heating a flavor generating article according to this embodiment. A flavor inhaler **100** according to this embodiment is configured to produce a flavor or aerosol by heating a flavor source or an aerosol source contained in a flavor generating article. As shown in the drawing, the flavor inhaler **100** comprises a first housing **110**, a second housing **120**, and a mouthpiece **130**. The first housing **110** and the second housing **120** are configured to be detachable from one another. The mouthpiece **130** may be detachably connected to one end of the second housing **120**, or may be integrally formed with the second housing **120**.

[0057] FIG. **2** is a schematic diagram of an example of the flavor inhaler **100**. As shown in the drawing, the flavor inhaler **100** comprises: a battery **140**, a heating unit **150** and a control circuit **170** which are disposed inside the first housing **110**; and a cooling unit **160** which is disposed inside the second housing **120**. The first housing **110** and the second housing **120** are pivotably connected to one another by means of a hinge, for example. The first housing **110** and the second housing **120** may equally be connected to one another by means of snap fitting or screwing, etc., so as to be completely separable. The cooling unit **160**, mouthpiece **130**, and heating unit **150** can be easily cleaned by completely separating the first housing **110** and the second housing **120** from one another in this way.

[0058] The battery **140** is configured to supply electrical power to the heating unit **150** and the control circuit **170**, etc. The battery **140** is a lithium ion battery, for example. The battery **140** may be rechargeable by means of an external power source. The cooling unit **160** is configured to cool the aerosol formed by a flavor generating article **10**. The cooling unit **160** may be a space in which the transiting aerosol is naturally cooled, for example. Alternatively, the cooling unit **160** may be provided or filled with one or more materials selected from the group consisting of polyethylene, polypropylene, polyvinyl chloride, polyethylene terephthalate, polylactic acid, cellulose acetate and aluminum foil. The aerosol can be cooled more efficiently by providing or filling the cooling unit **160** with these materials.

[0059] In the example depicted, the heating unit **150** comprises an induction coil **150***b* for induction heating a susceptor contained in the flavor generating article **10**. It should be noted that the flavor inhaler **100** shown in FIG. **2** may also comprise, between the heating unit **150** and the control circuit **170**, an electromagnetic shield (not depicted) which keeps electromagnetic waves generated by the induction coil **150***b* from reaching the control circuit **170**. The heating unit **150** is configured to heat the flavor generating article **10** to 200° C. to 350° C., for example.

[0060] The control circuit **170** is configured by a CPU and a memory, etc. and controls operation of the flavor inhaler **100**. For example, the control circuit **170** starts heating of the flavor generating article **10** in response to a user operation on an input device such as a push-button or slide switch (not depicted), and terminates heating of the flavor generating article **10** once a given time has elapsed. When the number of puffing actions by the user has passed a given value, the control circuit **170** may terminate heating of the flavor generating article **10** even if the given time has not yet elapsed from the start of heating of the flavor generating article **10**. Puffing actions are detected by means of a sensor which is not depicted, for example.

[0061] Alternatively, the control circuit **170** may start heating of the flavor generating article **10** in response to the start of a puffing action, and may terminate heating of the flavor generating article **10** in response to the end of the puffing action. When a given time has elapsed from the start of the puffing action, the control circuit **170** may terminate heating of the flavor generating article **10** even if the puffing action has not yet finished. In the example depicted, the control circuit **170** is disposed between the battery **140** and the heating unit **150**, and transfer of heat from the heating unit **150** to the battery **140** is suppressed.

[0062] The flavor generating article **10** generates a vapor or an aerosol of the aerosol source or flavor source as a result of being heated by means of the heating unit **150**. The vapor and aerosol generated in the flavor generating article **10** are cooled by passing through the cooling unit **160** and are delivered into the user's mouth through the mouthpiece **130**. The flavor generating article **10** of this embodiment is in the form of a sheet, a plate or a card.

[0063] The flavor generating article **10** will be described in detail next. FIG. **3** is an oblique view of the flavor generating article **10**. FIG. **4** is a view in cross section seen from a longitudinal direction d**1** of the flavor generating article **10** shown in FIG. **3**. As shown in FIG. **3**, the flavor generating article **10** may be formed in the shape of a flat sheet overall. As shown in FIG. **3** and FIG. **4**, the flavor generating article **10** comprises: a flat susceptor-containing sheet **20** comprising a susceptor material; and a waveform first sheet **42** and second sheet **44** which are disposed on both sides of the susceptor-containing sheet **20**. Specifically, the susceptor-containing sheet **20** is a substantially flat sheet overall. At least one of the susceptor-containing sheet **20**, the first sheet **42** and the second sheet **44** contains tobacco and produces the flavor or aerosol by means of heating. In this embodiment, the first sheet **42** and the second sheet **44** have a sinusoidal waveform cross section. This is not limiting, however, and at least one of the first sheet **42** and the second sheet **44** may have a waveform cross section of any shape, such as a rectangular waveform, triangular waveform, or sawtooth waveform.

[0064] Specific tobaccos that may be cited include dried tobacco leaf shreds, ground leaf tobacco, and tobacco extract (an extract employing water, an organic solvent, or a mixture thereof). The ground leaf tobacco constitutes particles obtained by grinding leaf tobacco. The ground leaf tobacco may have an average particle size of 30 to 120 μm, for example. The grinding may be carried out using a well-known grinding machine, and may be dry grinding or wet grinding. Ground leaf tobacco is therefore also referred to as leaf tobacco particles. In this embodiment, the average particle size is determined by means of laser diffraction/scattering, and the average particle size is specifically measured by using a laser diffraction particle size distribution measurement apparatus (e.g., LA-950 available from HORIBA Ltd.). Furthermore, there is no limitation as to the type of tobacco, and it is possible to use yellow, Burley, Oriental or native type, and other *Nicotiana tabacum* varieties and *Nicotiana rustica* varieties, etc. There is no particular limitation as to the amount of tobacco contained in the first susceptor-containing sheet **20**, the first sheet **42**, or the second sheet **44**, but the amount is preferably 1 to 30 wt % and more preferably 10 to 20 wt %.

[0065] When at least one of the first sheet **42** and the second sheet **44** contains tobacco, the tobacco may be supported on a sheet formed by non-tobacco fibers such as pulp fibers or a nonwoven fabric, for example. Alternatively, at least one of the first sheet **42** and the second sheet **44** may be formed by a tobacco sheet. A sheet produced from tobacco leaf, a cast sheet of tobacco leaf, or a rolled sheet of tobacco leaf, etc. may be used for the tobacco sheet. The tobacco sheet may further comprise an aerosol source. There is no particular limitation as to the type of aerosol source, and extracts from various types of natural products and/or components thereof may be selected depending on the purpose of use. The aerosol source is preferably a polyhydric alcohol, and may be, for example, glycerol, propylene glycol, triacetin, 1,3-butanediol, and mixtures thereof.

[0066] In the flavor generating article **10** shown in FIG. **3** and FIG. **4**, gaps S**1**, S**2** for the passage of the flavor or aerosol generated from the tobacco are respectively formed between the susceptor-containing sheet **20** and the first sheet **42** and second sheet **44**. This enables efficient downstream delivery of the flavor or aerosol generated from the tobacco. Furthermore, the susceptor-containing sheet **20** comprises the susceptor material, and the tobacco can therefore be heated without a heating source coming into contact with the flavor generating article **10**. The flavor or aerosol can therefore be stably delivered because the gaps S**1**, S**2** are not crushed etc. as a result of a heater or the like contacting the flavor generating article **10**. In addition, the susceptor-containing sheet **20** which comprises the susceptor material is arranged in such a way as to be sandwiched between the first sheet **42** and the second sheet **44**, so transmission of heat generated by the susceptor material to the surface of the flavor generating article **10** can be inhibited by the gaps through which the flavor or aerosol passes. As a result, it is possible to eliminate the need for a complex insulating mechanism in the flavor inhaler **100**. The tobacco may contain an aerosol source. Furthermore, at least one of the susceptor-containing sheet **20**, the first sheet **42**, and the second sheet **44** may contain an aerosol source. The amount of aerosol delivered to the user can be increased in this case.

[0067] As shown in FIG. **4**, the first sheet **42** comprises a first face **42***a* facing the susceptor-containing sheet **20**, and a second face **42***b* opposite the first face **42***a*. In this embodiment, a first liner sheet **51** is preferably provided on the second face **42***b*. In this case, the first sheet **42** is covered by the first liner sheet **51**, so the user can handle the flavor generating article **10** without touching the first sheet **42** directly. This inhibits crushing of the first sheet **42**, and the gap S**1** between the susceptor-containing sheet **20** and the first sheet **42** can therefore be maintained so that the flavor or aerosol can be stably delivered. The first liner sheet **51** may furthermore inhibit transmission of heat from the susceptor-containing sheet **20** to the user's hand when the flavor generating article **10** is removed from the flavor inhaler **100** after use of the flavor generating article **10**.

[0068] In the same way, the second sheet **44** comprises a first face **44***a* facing the susceptor-containing sheet **20**, and a second face **44***b* opposite the first face **44***a*. In this embodiment, a second liner sheet **52** is preferably provided on the second face **44***b*. In this case, the second sheet **44** is covered by the second liner sheet **52**, so the user can handle the flavor generating article **10** without touching the second sheet **44** directly. This inhibits crushing of the second sheet **44**, and the gap S**2** between the susceptor-containing sheet **20** and the second sheet **44** can therefore be maintained so that the flavor or aerosol can be stably delivered. The second

liner sheet **52** may furthermore inhibit transmission of heat from the susceptor-containing sheet **20** to the user's hand when the flavor generating article **10** is removed from the flavor inhaler **100** after use of the flavor generating article **10**.

[0069] At least one of the first liner sheet **51** and the second liner sheet **52** is preferably paper. In this case, a lightweight and inexpensive flavor generating article **10** can be provided. As shown in FIG. **4**, a gap S**3** is formed between the first sheet **42** and the first liner sheet **51**. The gap S**3** is preferably partially or completely closed. In this case, the passage of air through the gap S**3** between the first sheet **42** and the first liner sheet **51** is inhibited. This makes it easier for air passing through the flavor generating article **10** to flow through the gaps S**1**, S**2** between the susceptor-containing sheet **20** and the first sheet **42** and second sheet **44**, which therefore enables efficient downstream delivery of the flavor or aerosol generated from the susceptor-containing sheet **20**. In the same way, a gap S**4** is formed between the second sheet **44** and the second liner sheet **52**. The gap S**4** is preferably partially or completely closed. In this case, the passage of air through the gap S**4** between the second sheet **44** and the second liner sheet **52** is inhibited. This makes it easier for air passing through the flavor generating article **10** to flow through the gaps S**1**, S**2** between the susceptor-containing sheet **20** and the first sheet **42** and second sheet **44**, which therefore enables efficient downstream delivery of the flavor or aerosol generated from the susceptor-containing sheet **20**. As shown in FIG. **4**, at least one of the first liner sheet **51** and the second liner sheet **52** is preferably flat.

[0070] As shown in FIG. **3**, the first sheet **42** and the second sheet **44** have projections and depressions extending along the longitudinal direction d**1**, giving a waveform cross section. The first sheet **42** and the second sheet **44** may also be referred to as ridged sheets overall.

[0071] At least one of the first sheet **42** and the second sheet **44** may be a non-tobacco sheet formed by a non-tobacco material. Specifically, in this case, at least one of the first sheet **42** and the second sheet **44** preferably comprises paper or molded pulp, for example. A lightweight, inexpensive and robust flavor generating article **10** can be formed by this means. At least one of the first sheet **42** and the second sheet **44** may contain tobacco. In this case, the tobacco contained in at least one of the first sheet **42** and the second sheet **44** can be heated by induction heating of the susceptor-containing sheet **20**, and the flavor or aerosol can be produced.

[0072] In the example shown in FIG. **4**, the first sheet **42** and the second sheet **44** have the same waveform cross-sectional shape and face each other with the susceptor-containing sheet **20** therebetween so that phases thereof are offset by 90°. In other words, the first sheet **42** comprises projections **42***c* and depressions **42***d*, the second sheet **44** comprises projections **44***c* and depressions **44***d*, and the first sheet **42** and the second sheet **44** may be arranged so that the depressions **42***d* and projections **44***c* face each other with the susceptor-containing sheet **20** therebetween.

[0073] FIG. **5** is a view in cross section seen from the longitudinal direction d**1** of a flavor generating article **10** according to another embodiment. As shown in FIG. **5**, the first sheet **42** and the second sheet **44** have the same waveform cross-sectional shape and may face each other with the susceptor-containing sheet **20** therebetween so that phases thereof are matching. In other words, the first sheet **42** and the second sheet **44** may be arranged so that the depressions **42***d* of the first sheet **42** and the depressions **44***d* of the second sheet **44** face each other with the susceptor-containing sheet **20** therebetween.

[0074] In the examples shown in FIG. **4** and FIG. **5**, the waves in the cross sections of the first sheet **42** and the second sheet **44** have the same height and width. However, the height or width of the waves in the cross section of the first sheet **42** may be varied from the height or width of the waves in the cross section of the second sheet **44**.

[0075] The height h**1** of wave portions of at least one of the first sheet **42** and the second sheet **44** is preferably 0.2 mm to 2.0 mm. If the height h**1** (see FIG. **4**) of the wave portions is less than 0.2 mm, then the gaps S**1**, S**2** between the susceptor-containing sheet **20** and at least one of the first sheet **42** and second sheet **44** will be excessively small, so there is a risk that efficient downstream delivery of the flavor or aerosol generated from the tobacco will no longer be possible. Furthermore, in that case, there is also a risk of a reduction in heat insulation afforded by the gaps S**1**, S**2** between the susceptor-containing sheet **20** and at least one of the first sheet **42** and second sheet **44**. If the height h**1** of the wave portions is greater than 2.0 mm, then the flavor generating article **10** will be excessively large in size. The flavor or aerosol can therefore be efficiently delivered and the size of the flavor generating article **10** can be limited if the height h**1** of the wave portions is within the numerical value range above.

[0076] The width (i.e., the length between wave peaks) of at least one of the first sheet **42** and the second sheet **44** is preferably 0.2 mm to 2.0 mm. If this width is less than 0.2 mm, then there is a risk of an undesirable increase in suction resistance when the aerosol passes between waves before being inhaled. If this width is greater than 2.0 mm, then there is a risk of a reduction in strength of the flavor generating article **10**. The strength of the flavor generating article **10** can be maintained while an increase in undesirable suction resistance is suppressed if the width is within the numerical value range above.

[0077] At least one of the first sheet **42** and the second sheet **44** may contain a flavoring material. In this case, the flavoring material can be supplied to the user in addition to the flavor or aerosol. There is no particular limitation as to the type of flavoring material, and, from the point of view of imparting a favorable flavoring sensation, it is possible to select at least one from among: acetanisole, acetophenone, acetylpyrazine, 2-acetylthiazole, alfalfa extract, amyl alcohol, amyl butyrate, trans-anethole, star anise oil, apple juice, Peru Balsam oil, beeswax absolute, benzaldehyde, benzoin resinoid, benzyl alcohol, benzyl benzoate, benzyl phenylacetate, benzyl propionate, 2,3-butanedione, 2-butanol, butyl butyrate, butyric acid, caramel, cardamom oil, carob absolute, β-carotene, carrot juice, L-carvone, β-caryophyllene, cassia bark oil, cedarwood oil, celery seed oil, chamomile oil, cinnamaldehyde, cinnamic acid, cinnamyl alcohol, cinnamyl cinnamate, citronella oil, DL-citronellol, clary sage extract, cocoa, coffee, cognac oil, coriander oil, cuminaldehyde, davana oil, δ-decalactone, γ-decalactone, decanoic acid, dill herb oil, 3,4-dimethyl-1,2-cyclopentanedione, 4,5-dimethyl-3-hydroxy-2,5-dihydrofuran-2-one, 3,7-dimethyl-6-octenoic acid, 2,3-dimethylpyrazine, 2,5-dimethylpyrazine, 2,6-dimethylpyrazine, 2-ethyl methylbutyrate, ethyl acetate, ethyl butyrate, ethyl hexanoate, ethyl isovalerate,

ethyl lactate, ethyl laurate, ethyl levulinate, ethyl maltol, ethyl octanoate, ethyl oleate, ethyl palmitate, ethyl phenylacetate, ethyl propionate, ethyl stearate, ethyl valerate, ethyl vanillin, ethyl vanillin glucoside, 2-ethyl-3,(5 or 6)-dimethylpyrazine, 5-ethyl-3-hydroxy-4-methyl-2(5H)-furanone, 2-ethyl-3-methylpyrazine, eucalyptol, fenugreek absolute, genet absolute, gentian root infusion, geraniol, geranyl acetate, grape juice, guaiacol, guava extract, γ-heptalactone, γ-hexalactone, hexanoic acid, cis-3-hexen-1-ol, hexyl acetate, hexyl alcohol, hexyl phenylacetate, honey, 4-hydroxy-3-pentenoic acid lactone, 4-hydroxy-4-(3-hydroxy-1-butenyl)-3,5,5-trimethyl-2-cyclohexen-1-one, 4-(para-hydroxyphenyl)-2-butanone, 4-hydroxyundecanoic acid sodium salt, immortelle absolute, β-ionone, isoamyl acetate, isoamyl butyrate, isoamyl phenylacetate, isobutyl acetate, isobutyl phenylacetate, jasmine absolute, kola nut tincture, labdanum oil, lemon terpeneless oil, glycyrrhiza extract, linalool, linalyl acetate, lovage root oil, maltol, maple syrup, menthol, menthone, L-menthyl acetate, paramethoxybenzaldehyde, methyl-2-pyrrolyl ketone, methyl anthranilate, methyl phenylacetate, methyl salicylate, 4'-methylacetophenone, methylcyclopentenolone, 3-methylvaleric acid, mimosa absolute, molasses, myristic acid, nerol, nerolidol, γ-nonalactone, nutmeg oil, δ-octalactone, octanal, octanoic acid, orange flower oil, orange oil, orris root oil, palmitic acid, ω-pentadecalactone, peppermint oil, petitgrain Paraguay oil, phenethyl alcohol, phenethyl phenylacetate, phenylacetic acid, piperonal, plum extract, propenyl guaethol, propyl acetate, 3-propylidene phthalide, prune juice, pyruvic acid, raisin extract, rose oil, rum, sage oil, sandalwood oil, spearmint oil, styrax absolute, marigold oil, tea distillate, α-terpineol, terpinyl acetate, 5,6,7,8-tetrahydroquinoxaline, 1,5,5,9-tetramethyl-13-oxacyclo(8.3.0.0(4.9))tridecane, 2,3,5,6-tetramethylpyrazine, thyme oil, tomato extract, 2-tridecanone, triethyl citrate, 4-(2,6,6-trimethyl-1-cyclohexenyl)-2-buten-4-one, 2,6,6-trimethyl-2-cyclohexen-1,4-dione, 4-(2,6,6-trimethyl-1,3-cyclohexadienyl)-2-buten-4-one, 2,3,5-trimethylpyrazine, γ-undecalactone, γ-valerolactone, vanilla extract, vanillin, veratraldehyde, violet leaf absolute, N-ethyl-p-menthane-3-carboamide (WS-3), ethyl-2-(p-menthane-3-carboxamide) acetate (WS-5), sugar (sucrose, fructose, etc.), cocoa powder, carob powder, coriander powder, licorice powder, orange peel powder, rose pip powder, chamomile flower powder, lemon verbena powder, peppermint powder, leaf powder, spearmint powder, tea powder, natural plant flavorings (e.g., jasmine oil, lemon oil, vetiver oil, lovage oil), and esters.

[0078] Furthermore, the susceptor-containing sheet **20** may extend only partly in the longitudinal direction d**1** or a width direction d**2** of the flavor generating article **10**. In this case, the susceptor-containing sheet **20** may have a smaller length or width than the overall length or width of the flavor generating article **10**. Accordingly, the flavor generating article **10** does not need to be provided with a susceptor-containing sheet **20** having the same size as the overall size of the flavor generating article **10**, so the required amount of susceptor-containing sheet **20** can be provided for the flavor generating article **10** and the amount of susceptor material can be reduced.

[0079] FIG. **6**A is a view in cross section showing the configuration of the susceptor-containing sheet **20** in the flavor generating article **10** according to this embodiment. FIG. **6**B is a view in cross section showing the configuration of the susceptor-containing sheet **20** in a flavor generating article **10** according to another embodiment. As shown in FIG. **6**A, the susceptor-containing sheet **20** according to this embodiment may comprise a sheet-form susceptor material **25**, and a tobacco sheet **21** laminated on the sheet-form susceptor material **25**. In this case, the tobacco sheet **21** can be heated by means of induction heating of the sheet-form susceptor material **25**.

[0080] Specifically, in this embodiment, the tobacco sheet **21** of the susceptor-containing sheet **20** preferably comprises a first tobacco sheet **21***a* and a second tobacco sheet **21***b*. In this case, as shown in FIG. **6**A, the sheet-form susceptor material **25** is preferably sandwiched between the first tobacco sheet **21***a* and the second tobacco sheet **21***b*. In this case, the first tobacco sheet **21***a* and the second tobacco sheet **21***b* can be heated more evenly by means of induction heating of the sheet-form susceptor material **25**. This is not limiting, and the second tobacco sheet **21***b* may equally be laminated directly on the first tobacco sheet **21***a*. Furthermore, the tobacco sheet **21** may comprise only either the first tobacco sheet **21***a* or the second tobacco sheet **21***b*.

[0081] The first tobacco sheet **21***a* and the second tobacco sheet **21***b* may have the same shape (thickness, length or width) or the same components, or may have different shapes (thickness, length or width) or different components. Specifically, for example, the first tobacco sheet **21***a* and the second tobacco sheet **21***b* may differ from each other in regard to at least one of flavor, thickness, aerosol source content and surface shape. Different flavours can be generated from the first tobacco sheet **21***a* and the second tobacco sheet **21***b* when the flavours therein are different. Accordingly, the desired flavor can be supplied to the user by adjusting respective delivery amounts of the flavours. For example, it is possible to provide different flavours by forming the first tobacco sheet **21***a* and the second tobacco sheet **21***b* as tobacco sheets with different types of tobacco blended therein, such as Burley, yellow, Oriental or native type, or with different tobacco blending ratios. When the thicknesses are different, the temperature of the relatively thin tobacco sheet rises more rapidly, enabling efficient initial delivery of the flavor or aerosol. In contrast to this, the temperature of the relatively thick tobacco sheet rises more slowly, making it possible to maintain flavor or aerosol generation to the latter stage of smoking. When the aerosol source contents are different, the temperature of the tobacco sheet having a relatively small aerosol source content rises more rapidly, enabling efficient initial delivery of the flavor or aerosol. In contrast to this, the temperature of the tobacco sheet having a relatively large aerosol source content rises more slowly, making it possible to maintain flavor or aerosol generation to the latter stage of smoking. Furthermore, when the tobacco sheets have different surface shapes, the tobacco sheet with the relatively large surface area enables efficient initial delivery of the flavor or aerosol. In contrast to this, the temperature of the tobacco sheet having a relatively small surface area rises more slowly, making it possible to maintain flavor or aerosol generation to the latter stage of smoking.

[0082] In the example shown in FIG. **5**, the first sheet **42** and the second sheet **44** have the same waveform cross-sectional shape, as described above. This is not limiting, however, and the height of the wave portions of the first sheet **42** and the height of the wave portions of the second sheet **44** may be different. In this case, the gap S**1** between the susceptor-containing sheet **20** and the first sheet **42**, and

the gap S2 between the susceptor-containing sheet **20** and the second sheet **44** can be made different sizes. Accordingly, when the susceptor-containing sheet **20** is formed by laminating the first tobacco sheet **21***a* and the second tobacco sheet **21***b*, as shown in FIG. **6**A, for example, a first flavor from the first tobacco sheet **21***a* is made to pass through the gap S**1** and a second flavor from the second tobacco sheet **21***b* is made to pass through the gap S**2**, whereby the desired flavor can be supplied to the user by adjusting respective delivery amounts thereof.

[0083] The sheet-form susceptor material **25** may have a smaller area than the tobacco sheet **21**. In this case, a smaller amount of the susceptor material **25** can be used. It should be noted that the area here means the area of the tobacco sheet **21** or the susceptor material **25** extending over the longitudinal direction d**1** and the width direction d**2** shown in FIG. **3**.

[0084] As shown in FIG. **6**B, the susceptor-containing sheet **20** according to another embodiment may comprise the tobacco sheet **21** and a granular susceptor material **26**. In this case, the tobacco sheet **21** can be heated by means of induction heating of the granular susceptor material **26**. In the example depicted, the granular susceptor material **26** is contained within the tobacco sheet **21**, but this is not limiting, and the granular susceptor material **26** may equally be arranged so as to be attached to the surface of the tobacco sheet **21**. The particle size of the granular susceptor material **26** may be 0.1 mm to 3 mm, for example.

[0085] The thickness of the tobacco sheet **21** shown in FIG. **6**A and FIG. **6**B is preferably 0.25 mm to 4.0 mm. If the thickness of the tobacco sheet **21** is less than 0.25 mm, then there is a risk of a reduction in the amount of flavor or aerosol generated per unit area of the sheet. If the thickness of the tobacco sheet **21** is greater than 4.0 mm, then the flavor generating article **10** will be excessively large in size. In that case, it takes time to heat the tobacco sheet **21**, and there is a risk of more time being needed until the first puff, and of the amount delivered by the first puff being inadequate. The flavor or aerosol can therefore be sufficiently generated and the size of the flavor generating article **10** can be limited if the thickness of the tobacco sheet **21** is within the numerical value range above. It should be noted that when the tobacco sheet **21** comprises multiple tobacco sheets, as shown in FIG. **6**A, the thickness as referred to here means the total thickness of the multiple tobacco sheets.

[0086] A sheet produced from tobacco leaf, a cast sheet of tobacco leaf, or a rolled sheet of tobacco leaf, etc. may be used as the tobacco sheet **21** shown in FIG. **6**A and FIG. **6**B. The tobacco sheet **21** may further comprise an aerosol source. There is no particular limitation as to the type of aerosol source, and extracts from various types of natural products and/or components thereof may be selected depending on the purpose of use. The aerosol source is preferably a polyhydric alcohol, and may be, for example, glycerol, propylene glycol, triacetin, 1,3-butanediol, and mixtures thereof. Furthermore, the tobacco sheet **21** may also comprise the flavoring materials mentioned above which may be added to the first sheet **42** and the second sheet **44**.

[0087] FIG. **7**A is a view in cross section showing the configuration of the susceptor-containing sheet **20** in a flavor generating article **10** according to another embodiment. FIG. **7**B is a view in cross section showing the configuration of the susceptor-containing sheet **20** in a flavor generating article **10** according to yet another embodiment. The susceptor-containing sheets **20** shown in FIG. **7**A and FIG. **7**B differ from the susceptor-containing sheets **20** shown in FIG. **6**A and FIG. **6**B in that the former do not contain tobacco. The susceptor-containing sheet **20** shown in FIG. **7**A consists only of the sheet-form susceptor material **25**. Furthermore, the susceptor-containing sheet **20** shown in FIG. **7**B comprises the sheet-form susceptor material **25**, and a non-tobacco sheet **27** laminated on the susceptor material **25**. The susceptor-containing sheets **20** shown in FIG. **7**A and FIG. **7**B do not contain tobacco, in which case at least one of the first sheet **42** and the second sheet **44** shown in FIG. **3**-**5** therefore contains the tobacco. By this means, the tobacco contained in at least one of the first sheet **42** and the second sheet **44** can be heated by induction heating of the susceptor-containing sheet **20**, and the flavor or aerosol can be produced.

[0088] The non-tobacco sheet **27** in the susceptor-containing sheet **20** shown in FIG. **7**B may comprise paper or molded pulp. A lightweight, inexpensive and robust flavor generating article **10** can be formed by this means. The non-tobacco sheet **27** may be a nonwoven fabric or the like, for example. The non-tobacco sheet **27** may hold an aerosol source. The amount of aerosol delivered to the user can be increased in this case.

[0089] Embodiments of the present invention were described above, but the present invention is not limited to those embodiments, and various modifications are possible within the scope of the technical concept disclosed in the claims, specification and drawings. Moreover, any shape or material not directly stated in the specification or drawings is also within the scope of the technical concept of the invention of this application provided that it exhibits the action and effect of the invention of this application.

REFERENCE SIGNS LIST

[0090] **10**: Flavor generating article
[0091] **20**: Sheet member
[0092] **21**: Tobacco sheet
[0093] **21***a*: First tobacco sheet
[0094] **21***b*: Second tobacco sheet
[0095] **25**, **26**: Susceptor material
[0096] **27**: Non-tobacco sheet
[0097] **42**: First sheet
[0098] **42***a*: First face
[0099] **42***b*: Second face
[0100] **44**: Second sheet
[0101] **44***a*: First face
[0102] **44***b*: Second face
[0103] **51**: First liner sheet
[0104] S**3**: Gap
[0105] S**4**: Gap
[0106] d**1**: Longitudinal direction
[0107] d**2**: Width direction
[0108] h**1**: Height

1. A flavor generating article comprising: a flat susceptor-containing sheet comprising a susceptor material; and

a waveform first sheet and second sheet which are disposed on both sides of the susceptor-containing sheet, wherein

at least one of the susceptor-containing sheet, the first sheet and the second sheet contains tobacco.

2. The flavor generating article as claimed in claim 1, wherein
the tobacco comprises an aerosol source.
3. The flavor generating article as claimed in claim 1, wherein
the first sheet comprises a first face facing the susceptor-containing sheet, and a second face opposite the first face, a liner sheet being provided on the second face.
4. The flavor generating article as claimed in claim 3, wherein
the liner sheet is paper.
5. The flavor generating article as claimed in claim 3, wherein
a gap between the first sheet and the liner sheet is partially or completely closed.
6. The flavor generating article as claimed in claim 1, wherein
at least one of the first sheet and the second sheet comprises paper or molded pulp.
7. The flavor generating article as claimed in claim 1, wherein
the height of wave portions of at least one of the first sheet and the second sheet is 0.2 mm to 2.0 mm.
8. The flavor generating article as claimed in claim 1, wherein
the height of wave portions of the first sheet and the height of wave portions of the second sheet are different.
9. The flavor generating article as claimed in claim 1, wherein
the width of wave portions of at least one of the first sheet and the second sheet is 0.2 mm to 2.0 mm.
10. The flavor generating article as claimed in claim 1, wherein
at least one of the first sheet and the second sheet comprises a flavoring material.
11. The flavor generating article as claimed in claim 1, wherein
the susceptor-containing sheet extends only partly in a longitudinal direction or a width direction of the flavor generating article.
12. The flavor generating article as claimed in claim 1, wherein
the susceptor-containing sheet comprises the susceptor material in sheet-form, and a tobacco sheet laminated on the sheet-form susceptor material.
13. The flavor generating article as claimed in claim 12, wherein
the sheet-form susceptor material has a smaller area than the tobacco sheet.
14. The flavor generating article as claimed in claim 12, wherein the tobacco sheet comprises a first tobacco sheet and a second tobacco sheet, and
the sheet-form susceptor material is sandwiched between the first tobacco sheet and the second tobacco sheet.
15. The flavor generating article as claimed in claim 14, wherein
the first tobacco sheet and the second tobacco sheet differ from each other in regard to at least one of flavor, thickness, aerosol source content and surface shape.
16. The flavor generating article as claimed in claim 1, wherein
the susceptor-containing sheet comprises a tobacco sheet and a granular susceptor material.
17. The flavor generating article as claimed in claim 12, wherein
the thickness of the tobacco sheet is 0.25 mm to 4.0 mm.
18. The flavor generating article as claimed in claim 1, wherein
the susceptor-containing sheet consists only of the susceptor material, or comprises the susceptor material in sheet-form and a non-tobacco sheet laminated on the sheet-form susceptor material.
19. The flavor generating article as claimed in claim 1, wherein
at least one of the first sheet and the second sheet contains the tobacco.
20. The flavor generating article as claimed in claim 1, wherein
at least one of the first sheet and the second sheet is a non-tobacco sheet.

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