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(54) **DEHYDRATED FLAVOUR FILTER**

(57) The present invention relates to a filter for an aerosol-generating article. The filter comprises filter material and at least one flavored filter segment, through which an aerosol stream is passable from a distal to a proximal segment end of said flavored segment. The filter contains at least one capsule and at least one dehydrated flavoring agent that is distributed at least partially inside

said flavored segment. The present invention also relates to a method to produce a filter segment comprising the steps of: a. providing a filter material, preferably consisting of at least one acetate, b. producing at least one dehydrated flavoring agent, c. impregnating the filter material with at least one dehydrated flavoring agent and d. plasticizing the filter material.

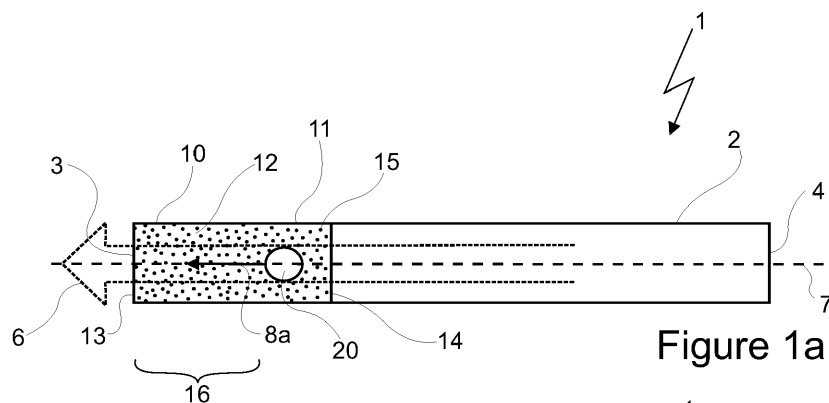


Figure 1a

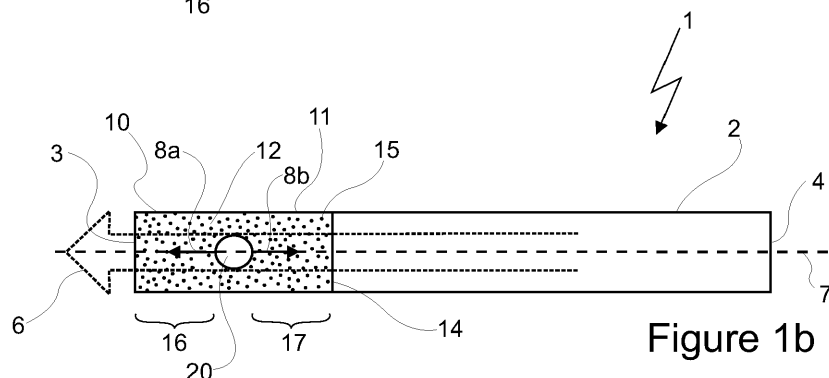


Figure 1b

Description

[0001] The present invention relates to an aerosol-generating article with a filter that comprises a flavored segment containing at least one capsule and at least one dehydrated flavoring agent that is distributed at least partially inside said flavored segment. The present invention also relates to a method to produce such filter segment.

[0002] In known cigarettes different methods are used to alter mainstream smoke of combustible cigarettes during a puff. One possibility is to pass the mainstream smoke through adsorbent particles and adsorbent filter material to adsorb and remove chemical components from the mainstream smoke during a puff. Activated carbon particles are typically used and are usually embedded in a cellulose acetate filter segment or provided as charcoal beads in a cavity between two cellulose acetate filter segments while the smoke passes through the filter towards the mouth end of the filter.

[0003] Other smoke altering components can also be incorporated into the filter. Those smoke altering components can in particular contain flavorants provided in the form of beads, which are arranged between filter plugs, within threads extending along the filter length or within breakable capsules encapsulating a liquid flavorant or neutral liquid such as water as wetting agent. While beads and threads provide inherent smoke altering upon consumption by a user, breakable capsules provide users with an opportunity to actuate smoke alteration "on demand", by crushing of the capsule manually or by biting the filter before or during use of the smoking article. Such on-demand flavoring by crushable capsules has been well received among consumers in general. However, the manufacturing of the crushable capsules and development of liquid flavors comprised therein is costly. Further, the processing of the capsules during filters and cigarettes manufacturing is constraining and can affect capsules integrity, leading to capsules defects and crushing during production, which affects the manufacturing efficiency and costs.

[0004] More recently, heat-not-burn smoking articles, which have a similar structure to standard cigarettes, with a tobacco containing part attached to a filter part as a mouthpiece, but are made to be heated with a heating member or in a heating chamber of an electronic heating device rather than combusted have been marketed worldwide. These new kind of smoking articles provide an alternative offer to traditional combustible cigarettes for consumers. They exhibit a similar structure to the conventional cigarettes, with a tobacco containing rod attached to a mouthpiece filter segment with a conventional tipping paper. However, they currently do not offer on-demand flavoring.

[0005] It is an objective of the present invention to provide an alternative on-demand smoke altering solution for a filtered aerosol-generating article, in particular for a smoking article such as a cigarette or a heat-not-burn consumable article, which does not suffer the defaults of

the prior art solutions, or to a limited extent only.

[0006] The afore-mentioned problems are eliminated by a filter for an aerosol-generating article. The filter comprises at least one flavored filter segment, through which an aerosol stream is passable from a distal to a proximal segment end of said flavored segment. The flavored segment comprises at least one capsule arranged in said filter material, and at least one dehydrated flavoring agent distributed at least partially inside said filter material. Preferably, said capsule contains a liquid.

[0007] The placement of at least one liquid containing capsule, together with the dehydrated flavoring agent allows for on-demand flavoring of an aerosol stream generated from an aerosol-generating source of an aerosol-generating article such as a cigarette, a heat-not-burn stick or even an e-cigarette through hydration of the dehydrated flavoring agent upon crushing of the capsule to release at least part of the liquid therein. Thus an aerosol passing through the filter of the invention may be gently and long lastingly flavored as the dehydrated flavoring agent becomes hydrated in the filter material after crushing the capsule. This provides a satisfying, progressive flavoring, which is become more intense at time lapses from the moment of crushing of the capsule, as opposed to simple capsule flavoring as known in the art, where the flavor intensity is higher right after crushing. It is also possible that the flavored filter segment comprises more than one flavoring agents, e.g. two or more, to allow the consumer to have extra flavor experience and possibly to have flavors with different hydrophilic properties so as to ensure long lasting flavoring.

[0008] In a preferred embodiment the dehydrated flavoring agent is embedded within and/or between the filter material of said segment. That way, the dehydrated flavoring agent can be distributed throughout the whole filter material of said segment.

[0009] In a further preferred embodiment, the filter material of the flavored segment is impregnated with the dehydrated flavoring agent. Dehydrated flavoring agents have longer shelf lives than hydrated agents and thus keep their flavor for a long time. Further, the manufacturing process is potentially easier and cheaper to impregnate the flavor agent and to place the capsule into the same filter than needing to use separate pieces and segmentation.

[0010] It is further conceivable that the flavoring agent is a powder or contains a powder. A powder form of the flavoring agent can be best distributed within the filter material. Preferably the size of the dehydrated powder particles is less than 1 mm, preferably less than 0.8 mm, preferably less 0.5 mm and larger than 0.05 mm, preferably larger than 0.1 mm, preferably larger than 0.2 mm. Further, larger particles will have a high chance of falling out of the end of the filter at the open end into the consumers mouth. Particles smaller than 0.05 mm are difficult to produce and to handle during production of the flavored filter segment.

[0011] In a preferred embodiment the dehydrated fla-

voring agent is formed from plant material capable of releasing flavor into an aerosol generated from an aerosol-generating substrate, for example through heating or combusting thereof. Preferably, these flavoring agent particles are discrete, solid particles, which are particularly soluble in water and may be formed of e.g. herbaceous plant material, which has been subjected to a mechanical process to densify the plant material or crystals, such as menthol crystal. It is also possible that the dehydrated flavoring agent is composed of originally tasteless particles that have been processed and flavored. Such material will release an especially high amount of flavor and may contain, mints, such as peppermint and spearmint, lemon balm, basil, cinnamon, lemon basil, chive, coriander, lavender, sage, tea, thyme or a combination thereof. Preferably, the flavor granules comprise non-tobacco plant material.

[0012] According to a preferred embodiment, said capsule is situated within said flavored segment and spaced from the proximal segment end along a longitudinal direction of the filter. Preferably said capsule is also concentrically arranged around a longitudinal axis of the flavored filter segment and particularly within an offset of a maximum of 60%, preferably of 40%, more preferably of 20% of the radius of the filter. Moreover, the capsule is spaced to a distal end of the flavored filter segment.

[0013] Preferably the spacing between the capsule and the proximal end of the filter segment is larger than the spacing between the capsule and the distal end of the filter. It is also possible that the spacing between the capsule and the proximal end of the filter segment is smaller than the spacing between the capsule and the distal end of the filter. It is further possible that the spacing between the capsule and the proximal end of the filter segment is similar to the spacing between the capsule and the distal end of the filter segment, so that the capsule is placed in the middle of the filter segment. This arrangement guarantees that the capsule is situated close to the middle of the filter segment or close a distal or proximal end of the filter segment. Thus, there are less interfaces for a released filling of the capsule to escape or leak from the flavored filter segment. During use of the inventive filter the filling of the capsule can then be brought into contact or mixed with an aerosol produced from an aerosol-generating source to which the filter is attached or adjoined.

[0014] In a preferred embodiment, said capsule comprises a liquid substance and allows the release of said liquid substance by activation. Preferably the capsule can be activated by breaking the capsule due to an external force so that the consumer can decide whether he wants to activate the release of capsules filling or not. It is also possible that two or more capsules with different fillings and/or flavors are incorporated into the flavored filter segment so that for example, the user can selectively break one or more of them to selectively customize the taste by crushing specific capsules hosting e.g. the wanted flavor and/or mix of flavors. When the liquid substance/s

are released the filter material of the flavored filter segment will be impregnated with the liquid substance and thus, the filter may be impregnated with additional flavors.

[0015] In a preferred embodiment, said liquid substance contains an aqueous solution, typically water and/or comprises a flavor solved in a liquid. Preferably the liquid is water. Water can make more direct contact with the flavor agent without having to flow into a separate neighboring segment. Further, water will hydrate the dehydrated flavoring agent, so that the hydrated flavoring agent is capable of releasing much more flavor to the smoke than in their dehydrated form. If the liquid substance contains a flavor solved in the liquid, such flavor can be mixed with the flavor of the dehydrated flavoring agent allowing the consumer to have a special taste experience.

[0016] In a further preferred embodiment, said capsule allows the release of said substance in a specific direction with respect to the longitudinal direction of the filter. Directional capsules may in particular be in the form described in EP 3531846 A1, to name of the present applicant.

[0017] Preferably, the substance contained in the capsule is released towards the distal end of the flavored filter segment, to avoid its content flowing towards the proximal end where a user puts his mouth in use.

[0018] Another preferred embodiment provides that the filter and/or the capsule has a circular or oval cross section. Oval or circular cross sections result in a good and comfortable feeling when holding a cigarette with a filter between fingers or lips while puffing said cigarette. Capsules can be broken very easily, when they are shaped circular or oval, while being less prone to breaking through inadvertent pressing of the filters during manufacturing. Moreover, if capsules would be edgy, they may destroy the fibers of the filter material. However, a polygonal shape, especially with rounded corners would also be possible.

[0019] In a preferred embodiment, the filter further comprises a carbon filter segment containing activated carbon. Preferably activated carbon particles are situated within another filter segment of the filter. Such a carbon containing filter segment is particularly impregnated with activated carbon particles, which may also be flavored. Those activated carbon particles are preferably used to filtrate certain constituents in the smoke and therefore the overall filtration of the smoke is improved with the removal of unwanted chemical components from the smoke.

[0020] According to a preferred embodiment the carbon containing filter segment is completely arranged longitudinally at the distal end of the flavored filter segment, which may in use be at the connection end of the inventive filter with a source of aerosol-generating material such as a tobacco containing rod of a smoking article or heat-not-burn article.

[0021] The afore-mentioned problems are also eliminated by an aerosol-generating article, which comprises

an aerosol-generating material segment comprising an aerosol-generating segment having a proximal end and a distal end and a filter according to the previous description attached at the proximal end of the aerosol-generating material segment. The aerosol-generating material segment, preferably comprises tobacco.

[0022] In a further object, the present invention further provides a method to produce a flavored filter segment for a filter according to the above description, comprising the steps of:

- a. providing a filter material, preferably consisting of cellulose acetate,
- b. providing at least one dehydrated flavoring agent,
- c. impregnating the filter material with at least one dehydrated flavoring agent,
- d. forming a rod from the filter material impregnated in step c.,
- e. cutting the rod into individual flavored filter segments.

[0023] In step b. at least one dehydrated flavoring agent is provided, which may for instance be produced by spray drying. The dehydrated agent may be formed from a slurry comprising e.g. water, a carrier substance and/or at least one flavored substance, which is brought into a stream of hot gas and will be atomized. The slurry will preferably be dried to a fine dry powder containing the flavor of the flavored substance. Preferably the drying procedure takes place within 5 seconds, preferably within 3 seconds, preferably within 1 second. During this process, the slurry is sprayed preferably using a nozzle into a controlled drop size and dried very rapidly, trapping the volatile flavor constituents inside the droplets. The resulting powder is then recovered via cyclone collectors.

[0024] In this way, the flavor retention is quite satisfactory and the dryer operating parameters are properly cho-sable. Preferably, the flavor retention is maximized by using a high infeed level, high viscosity infeed, an optimum inlet, high exit gas temperatures and/or high molecular weight flavor molecules.

[0025] An optimum inlet of less than 300°C, preferably less than 250°C, preferably less than 220°C and/or higher than 80°C, preferably higher than 100°C, preferably higher than 140°C is preferred. Moreover, exit gas temperatures of less than 300°C, preferably less than 200°C, preferably less than 160°C and higher than 60°C, preferably higher than 80°C, preferably higher than 100°C are preferred.

[0026] The shelf life of oxidizable flavor compounds is strongly influenced by the flavor carrier, but is increased due to the dehydration process. The advantage of using a dehydration process is the preservation of flavor of flavored powder as well as the increased choice of possible flavor and the possibility of a combination of flavor compounds.

[0027] In a preferred embodiment of step c, impregnation of the filter material with at least one dehydrated fla-

vor-ing agent takes place just before or after the addition of a plasticizer to the filter material during the production process of a shaped filter material. Preferably the filter material is impregnated with said dehydrated flavoring agent after the addition of a plasticizer and before shaping the filter material.

[0028] In one embodiment, the plasticizer is triacetin or another softening agent with a high boiling point. The advantage of impregnating the filter material before its shaping is that the dehydrated flavoring agent can be distributed throughout the whole filter and between the fibers of the filter material. Preferably the dehydrated flavoring agent is dusted on the unshaped filter material.

[0029] In step d. the filter material that is impregnated with the dehydrated flavoring agent is shaped into a desired form. Preferably that desired form has a rod shape. A rod shaped filter can easily be cut into several pieces in step e. and is very suitably for use in any kind of smoking articles.

[0030] In a preferred embodiment, the flavoring agent comprises a powder or is a powder. A powder form of the flavoring agent can be best dusted on and distributed within the filter material. Preferably the size of the dehydrated powder particles is less than 1 mm, preferably less than 0.8 mm, preferably less than 0.5 mm and/or larger than 0.05 mm, preferably larger than 0.1 mm, preferably larger than 0.2 mm. Any larger particles will begin to affect the layering of the cellulose acetate in the filter. Further, larger particles will have a high chance of falling out of the end of the filter at the open end into the consumers mouth. Particles smaller than 0.05 mm are difficult to produce and to handle during production of the flavored filter segment.

[0031] Preferred is a lognormal particle size distribution of the particles of the flavoring agent. With lognormal distributed particle sizes of the flavoring agent, the size of particles to be impregnated in the filter material can be best determined and the risk that particles too large or too small for the desired purpose will find their way into the filter is extremely low.

[0032] In a preferred embodiment, during step d. a plurality of capsules are incorporated periodically into the filter rod and each cut flavored segment comprises at least one capsule arranged therein. The placement of at least one capsule, per flavored segment allows the addition of liquid and/or flavored material and/or aroma in a liquid and/or powdered and/or another form. In step e. the shaped filter material comprising the dehydrated flavoring agent and the capsule is cut into filter segments with specific dimensions.

[0033] Preferably such filter segments have a rod shape and are particularly cut into in such a way that the space between the capsule and a first end of the filter segment is larger than the spacing between the capsule and a second end of the filter segment. It is also possible that the filter is cut in such a way that the space between the capsule and the first end and the second of the filter segment is similar, so that the capsule is placed in the

middle of the filter segment. This arrangement guarantees that the capsule is situated close to the middle of the filter segment or close a distal or proximal end of the filter segment.

[0034] Further advantages, objectives and features of the present invention will be described, by way of example only, in the following description with reference to the appended figures. In the figures, like components in different embodiments can exhibit the same reference symbols.

[0035] The figures show:

Fig. 1a a schematic view of a smoking article 1 comprising a flavored filter segment and a capsule situated close to the distal end of the flavored filter segment.

Fig. 1b a schematic view of a smoking article 1 comprising a flavored filter segment and a capsule situated in the middle of the flavored filter segment.

Fig. 2 a schematic view of a smoking article 1 comprising a flavored filter segment, a capsule situated close to the distal end of the flavored filter segment and a carbon filter segment.

Fig. 3 method of producing a flavored filter segment comprising a capsule illustrated in a chart.

[0036] In Figure 1a, a schematic view of an aerosol-generating article 1 in the form of a combustible cigarette or heat-not-burn stick comprising a filter 10 according to the invention formed here of a single flavored filter segment 11 is shown. The aerosol-generating article 1 comprises an aerosol-generating, tobacco containing rod 2 and a flavoured filter segment 11 held together by tipping paper (not shown). The flavoured filter segment 11 includes filter material 12 that hosts at least one flavouring agent 15, which has preferably a powder form.

[0037] The filter material comprises in this example cellulose acetate and in which the flavouring agent 15 is embedded between fibers of the cellulose acetate of the filter 10. An aerosol fluidic stream 6, usually referred as "mainstream", may be generated upon heating or combustion of the aerosol-generating rod 2 and is then directed through the aerosol-generating article 1 when a user draws at a proximal end 13 of the filter 10 in use.

[0038] On its way through the aerosol-generating article 1 the aerosol fluidic stream 6 passes the aerosol-generating rod 2, the filter 10 as well as the flavored filter segment 11 with its distal 14 and proximal 13 end. On its way through the filter 10 the aerosol fluidic stream 6 passes the filter material 12 of the flavored filter segment 11 and the flavoring agent which is situated within the flavored filter segment 11 and preferably distributed throughout flavored filter segment 11.

[0039] The flavored filter segment 11 is completely ar-

ranged longitudinally at a proximal end 3 of the aerosol-generating article 1. Said aerosol-generating article 1 comprises a source of said aerosol fluidic stream 6, here consisting in a charge of tobacco wrapped in a paper wrapper to form the aerosol-generating rod 2 situated between the flavored filter segment 11 and the distal end 4 of the aerosol-generating article with respect to its longitudinal axis 7 or forms the distal end 4 of the aerosol-generating article.

[0040] A capsule 20 is located between the distal end 14 of the flavored filter segment 11 and the proximal end 13 of the flavored filter segment 11 and particularly the proximal end 3 of the aerosol-generating article 1. The center of the capsule may be positioned preferably at least 5 mm away, and preferably at least 8 mm away from any of the proximal end 3 or distal end 4 of the filter segment 1, i.e. substantially in a central part of the flavored filter segment 11.

[0041] The capsule 20 is also preferably concentrically arranged with respect to the longitudinal axis 7 and/or has a circular or oval cross section, wherein the capsule is preferably shaped spherically, cylindrically or conically and/or with the plane faces are arranged perpendicular to the longitudinal axis 7 in the case of a cylindrical or conical capsule. A particular configuration of the capsule 20 may correspond to that disclosed in EP 3531846 A1, to the name of the current applicant.

[0042] In the case of a spherical capsule, three axes may define the sphere of the capsule 20, wherein the longitudinal axis of the capsule is preferably parallel to the longitudinal axis 7 of the aerosol-generating article 1.

[0043] The capsule 20 may contain a liquid flavor carrier, but preferably a non-flavored liquid substance, preferably in the form of water, which may be released by activation by breaking the capsule 20 to release its liquid content throughout the filter material 12 such that the liquid contacts the dehydrated flavoring agent 15 for it to release its flavors as volatiles which may be captured in an aerosol stream circulating through the filter segment 11 in use of the aerosol-generating article 1.

[0044] In particular, the flavoring agent 15 is a powder. The powdered flavoring agent 15 is distributed throughout the filter material 12 of the flavored filter segment 11. Preferably the size of the dehydrated powder particles is less than 1 mm, preferably less than 0,8 mm, preferably 0,5 mm and/or larger than 0,05 mm, preferably larger than 0,1 mm, preferably larger than 0,2 mm.

[0045] In Figure 1b, a schematic view of an aerosol-generating article 1 with a flavored filter segment 11 similar to figure 1 is shown. Contrasting to figure 1 the capsule 20 preferably has a spherical shape and is situated in the middle of the flavored filter segment 11. The space 16 between the capsule 20 and the proximal end 13 of the flavored filter segment 11 is similar to the space 17 between the capsule 20 and the distal end 14 of the flavored filter segment 11. Preferably, the substance within the capsule 20 is releasable in both, the proximal 8a and a distal 8b direction.

[0046] In Figure 2, a schematic view of an aerosol-generating article 1 in the form of a combustible cigarette comprising two filter segments and a tobacco rod 2 held together by tipping paper (not shown) is shown. A carbon filter segment 30 contains activated carbon particles.

[0047] The carbon filter segment 30 is placed between the tobacco rod 2 and the flavored filter segment 11. Moreover, a proximal end 32 of the carbon filter segment 30 is arranged adjacent to the distal end 14 of the flavored filter segment 11 and the tobacco rod. Further, a length 34 of the carbon filter segment 30 is preferably smaller than a length 18 of the flavored filter segment 11.

[0048] The capsule 20 (which may also be positioned in another position as shown in Fig. 2) may contain a liquid flavor carrier, but preferably a non-flavored liquid substance, preferably in the form of water, which may be released by activation by breaking the capsule 20. The liquid substance is releasable in proximal direction 8, in a distal direction and or in proximal and distal direction as previously described in relation to fig. 1a.

[0049] Fig 3 shows a chart illustrating a method 80 of producing a flavored filter segment 11 for a filter 10 comprising a capsule 20 as described before. In a first step a filter material 12 is provided, which comprises at least cellulose acetate.

[0050] In a second step b at least one dehydrated flavoring agent 15 is produced, for example by spray drying. An aqueous infeed slurry comprising water, a carrier material and at least one flavored substance is produced in a first step b1 of the production of the dehydrated flavoring agent 15. Using a nozzle, the slurry is then brought b2 into a stream of hot gas to become dried and atomized.

[0051] Preferably, the flavor retention of the flavored particles in the infeed slurry is maximized by using a high infeed level, high viscosity infeed and an optimum inlet. An optimum inlet of less than 300°C, preferably less than 250°C, preferably less than 220°C and/or higher than 80°C, preferably higher than 100°C, preferably higher than 140°C is preferred. Optimum inlet temperatures of between 160°C and 210°C are preferred.

[0052] After the optimum inlet was reached, exit gas temperatures of less than 300°C, preferably less than 200°C, preferably less than 160°C and/or higher than 60°C, preferably higher than 80°C, preferably higher than 100°C are used. Exit gas temperatures higher than 100°C are preferred. After drying the sprayed slurry droplets, the resulting dehydrated flavoring agent 15 in a powdered form is then recovered b3 preferably via cyclone collectors.

[0053] The powdered dehydrated flavoring agent 15 has particle sizes less than 1 mm, preferably less than 0,8 mm, preferably less than 0,5 mm and/or larger than 0,05 mm, preferably larger than 0,1 mm, preferably larger than 0,2 mm. These particle sizes preferably have a log-normal particle size distribution.

[0054] In a third step, e.g. a step c the filter material 12 is impregnated with the flavoring agent 15 by dusting c2 the flavoring agent 15 on the unshaped filter material 12.

The impregnation of the filter material 12 with at least one dehydrated flavoring agent 15 preferably takes place before an addition c1 of a plasticizer, in particular triacetin to the filter material 12 during the production process of a shaped filter material 12 and before shaping the filter material 12 into a continuous filter rod in step d later on.

[0055] In an intermediate step c3, capsules 20 filled with a liquid substance, in particular water, are periodically, i.e. at controlled timely intervals, incorporated into the filter material 12 before shaping the filter material 12 into its final shape.

[0056] In a final step d, the filter material comprising the capsule and the dehydrated flavoring agent 15 in a powdered form is formed into a continuous filter rod shape, the continuous filter rod being wrapped with plug wrap paper and cut in a subsequent step e. into several individual filter segments 11 to be used for the manufacture of filters 10 and/or aerosol-generating articles 1 the usual way.

List of reference symbols

[0057]

1. aerosol-generating article
2. tobacco rod
3. proximal end of the aerosol-generating article
4. distal end of the aerosol-generating article
6. fluidic stream
7. longitudinal direction
- 8a. proximal direction
- 8b. distal direction
10. filter
11. flavored filter segment
12. filter material
13. proximal segment end of the flavored filter segment
14. distal segment end of the flavored filter segment
15. flavoring agent
16. space between the capsule and the proximal end of the flavored filter segment
17. space between the capsule and the distal end of the flavored filter segment
20. capsule
30. carbon filter segment
31. activated carbon particles
32. proximal end of the carbon filter segment
33. distal end of the carbon filter segment
34. length of the carbon filter segment
80. method of producing a flavored filter segment comprising a capsule
 - a. providing the filter material
 - b. producing a dehydrated flavoring agent
 - b1. providing an infeed material carrying a flavor
 - b2. bringing the infeed material into a stream of hot gas
 - b3. recovering the dehydrated flavoring agent
 - c. impregnating the filter material with a dehydrated

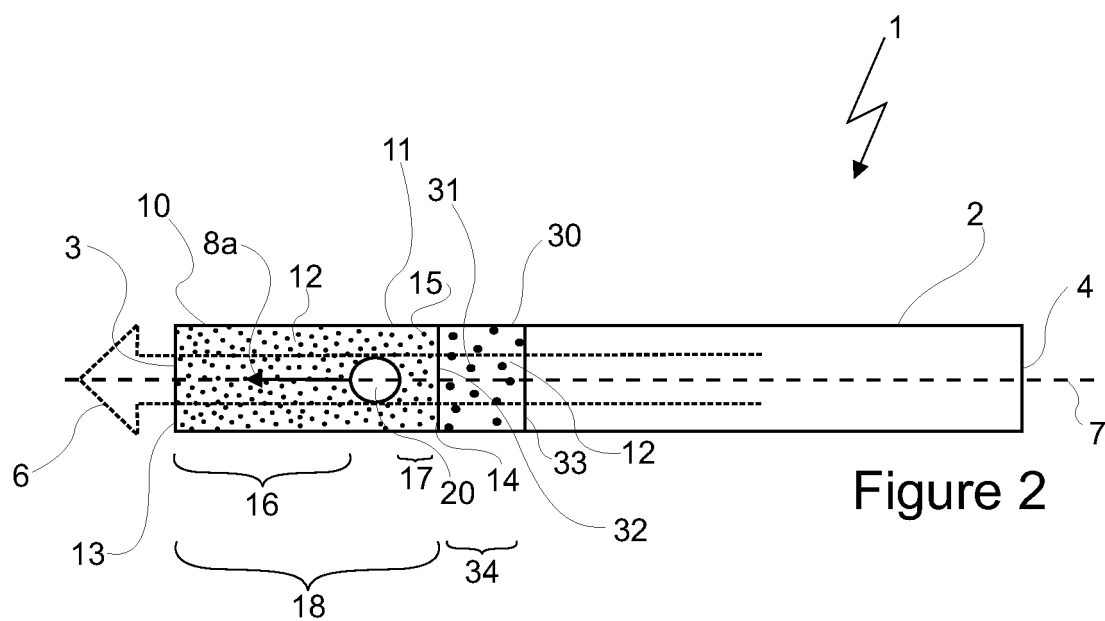
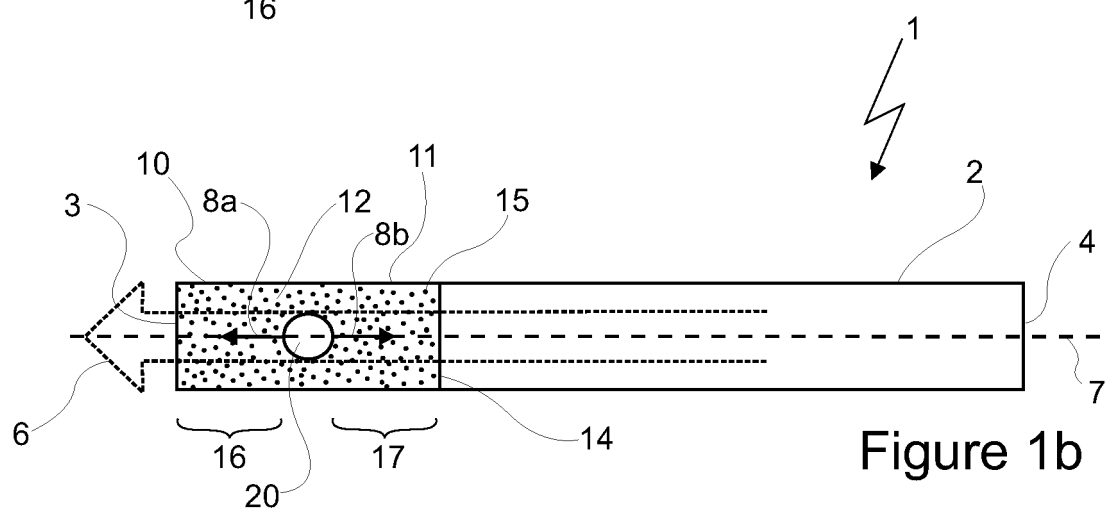
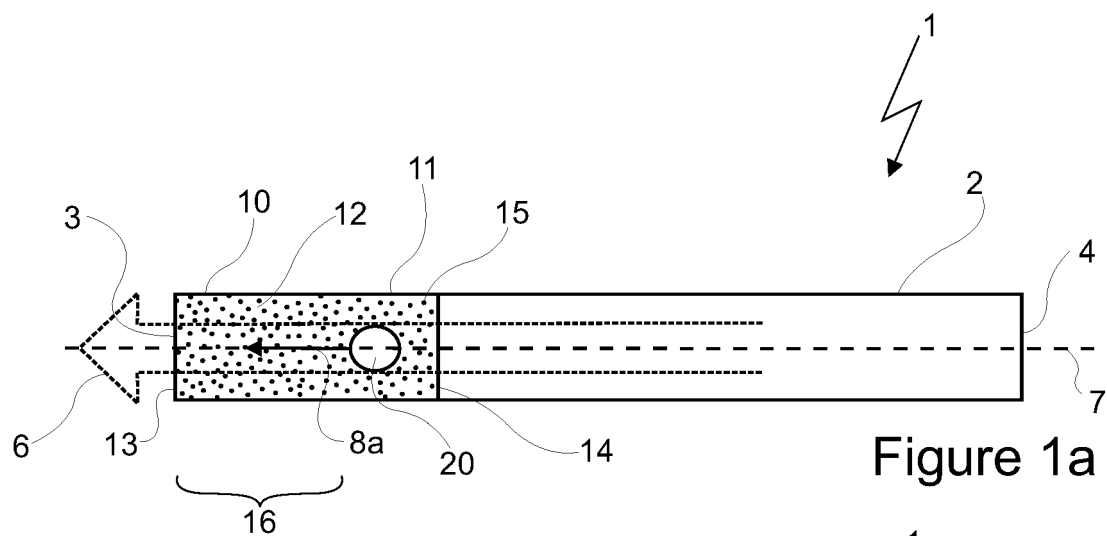
- flavoring agent
- c1. addition of a plasticizer
 - c2. dusting the dehydrated flavoring agent on the filter material
 - c3. Incorporating a capsule into the filter material
 - d. forming the filter material to a specific shape

Claims

1. A filter (10) for an aerosol-generating article (1), comprising at least one flavored filter segment (11) containing filter material (12), through which an aerosol stream (6) is passable from a distal (14) to a proximal (13) segment end of said flavored segment (11), **characterized in that** it comprises at least one capsule (20) arranged in said filter material (12) and at least one dehydrated flavoring agent (15) that is distributed at least partially inside said flavored segment (11).
2. A filter (10) according to claim 1, **characterized in that** the flavoring agent (15) is a powder.
3. A filter (10) according to any one of the preceding claims, **characterized in that** said capsule (20) is spaced from the proximal (13) segment end along a longitudinal direction (7) of the filter.
4. A filter (10) according to any one of the preceding claims, **characterized in that** said capsule (20) comprises a liquid substance and allows the release of said liquid substance by activation.
5. A filter (10) according to claim 4, **characterized in that** said liquid substance comprises an aqueous solution.
6. A filter (10) according to claim 4 or 5, **characterized in that**, said liquid substance comprises a flavor solved in a liquid.
7. A filter (10) according to any one of claims 4 to 6, **characterized in that** said capsule (20) allows the release of said substance in a specific direction (8) with respect to the longitudinal direction (7) of the filter.
8. A filter (10) according to any of previous claims, **characterized in that** the filter (10) and/or the capsule (20) has a circular

or oval cross section.

9. A filter (10) according to any of previous claims, **characterized in that** the filter comprises a carbon filter segment (30) containing activated carbon (31).
10. An aerosol-generating article (1), comprising an aerosol-generating material segment having a proximal end and a distal end and a filter according to any one of claims 1 to 9 attached at the proximal end of the aerosol-generating material segment.
11. An aerosol-generating article according to claim 10, **characterized in that** the aerosol-generating material segment comprises tobacco.
12. Method to produce a flavored filter segment (11) for a filter (10) according to any of claims 1-9 comprising the steps of:
 - a. providing a filter material (12), preferably consisting of cellulose acetate,
 - b. providing at least one dehydrated flavoring agent (15),
 - c. impregnating the filter material (12) with at least one dehydrated flavoring agent (15),
 - d. forming a rod from the filter material (12) impregnated in step c.
 - e. cutting the rod into individual flavored segments (11).
13. Method to produce a flavored filter segment (11) according to claim 12, **characterized in that** impregnation of the filter material (12) with at least one dehydrated flavoring agent (15) takes place just before or after the addition of a plasticizer to the filter material (12) during the production process of the filter rod.
14. Method to produce a flavored filter segment according to any one of claims 12-13, **characterized in that** the flavoring agent (15) comprises a powder.
15. Method to produce a filter segment according to any one of claims 12-14, **characterized in that** during step d. a plurality of capsules (20) are periodically incorporated into the filter rod (11) and each cut flavored segment (11) comprises at least one capsule arranged therein.



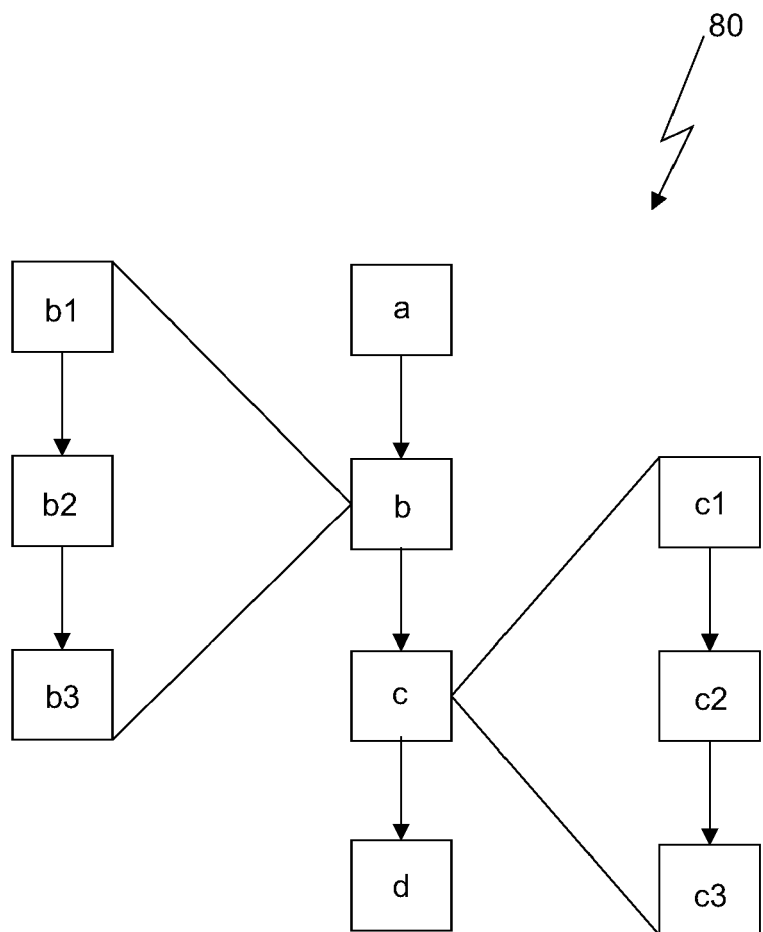


Figure 3



EUROPEAN SEARCH REPORT

Application Number
EP 19 21 5734

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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