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(54) **Smoking article having removable tipping wrapper portion**

(57) A smoking article (10) comprises an aerosol generating substrate (12), a mouthpiece (14) in axial alignment with the aerosol generating substrate (12) and a tipping wrapper (20) wrapped around the mouthpiece (14) and at least a portion of the aerosol generating substrate (12). The tipping wrapper (20) comprises at least one cut (22) extending around at least a portion of the tipping wrapper (20), an upstream tipping wrapper portion (24) extending upstream from the at least one cut (22), and a downstream tipping wrapper portion (26) extending downstream from the at least one cut (22). The upstream tipping wrapper portion (24) is attached to a downstream portion of the aerosol generating substrate (12) and an upstream portion of the mouthpiece (14), and the downstream tipping wrapper portion (26) is not directly attached to the portion of the mouthpiece (14) that is underlying the downstream tipping wrapper portion (26).

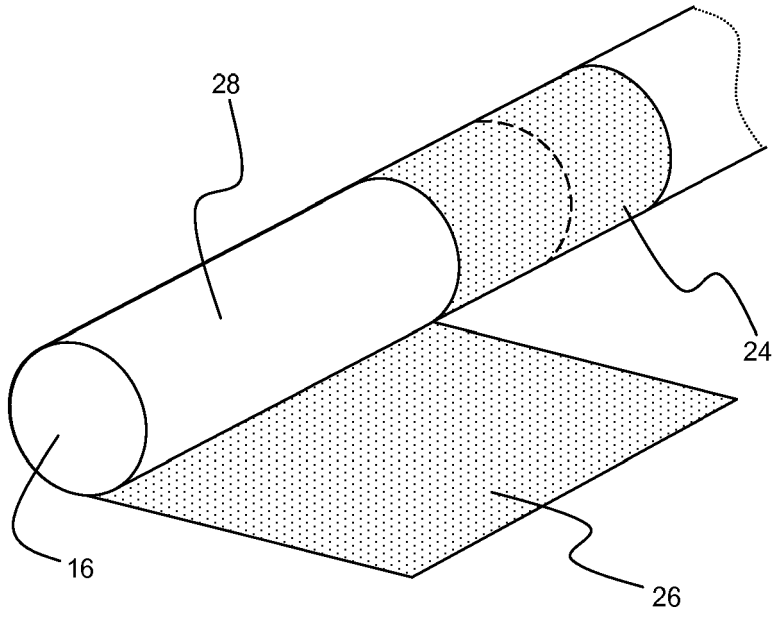

Figure 2

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Description

[0001] The present invention relates to a smoking article having a removable tipping wrapper portion. The present invention also relates to a method of forming such smoking articles.

[0002] Filter cigarettes typically comprise a cylindrical rod of tobacco cut filler surrounded by a paper wrapper and a cylindrical filter axially aligned in an abutting end-to-end relationship with the wrapped tobacco rod. The cylindrical filter typically comprises a filtration material circumscribed by a paper plug wrap. Conventionally, the wrapped tobacco rod and the filter are joined by a band of tipping wrapper, normally formed of an opaque paper material that circumscribes the entire length of the filter and an adjacent portion of the wrapped tobacco rod.

[0003] A number of smoking articles in which tobacco is heated rather than combusted have also been proposed in the art. In heated smoking articles, an aerosol is generated by heating a flavour generating substrate, such as tobacco. Known heated smoking articles include, for example, electrically heated smoking articles and smoking articles in which an aerosol is generated by the transfer of heat from a combustible fuel element or heat source to a physically separate aerosol forming material. During smoking, volatile compounds are released from the aerosol forming substrate by heat transfer from the fuel element and entrained in air drawn through the smoking article. As the released compounds cool they condense to form an aerosol that is inhaled by the consumer. Also known are smoking articles in which a nicotine-containing aerosol is generated from a tobacco material, tobacco extract, or other nicotine source, without combustion, and in some cases without heating, for example through a chemical reaction.

[0004] Hygiene is regarded as an important issue when considering the manufacture and subsequent handling of smoking articles, and for some consumers it may be undesirable to handle the mouth end of a smoking article when removing the smoking article from a pack and inserting it into their mouth. A previously proposed method for addressing such concerns is to provide a smoking article with an additional outer wrapper extending over the tipping wrapper, wherein the additional outer wrapper is removed by the consumer prior to smoking the smoking article. However, providing an additional wrapper is costly, adds further steps to the manufacturing process and may provide an undesirable increase in the outer diameter of the smoking articles at the mouth end. It would therefore be desirable to provide a smoking article that permits hygienic handling of the smoking article prior to consumption without requiring complex additional manufacturing steps.

[0005] Accordingly, the present invention provides a smoking article comprising an aerosol generating substrate, a mouthpiece in axial alignment with the aerosol generating substrate and a tipping wrapper wrapped around the mouthpiece and at least a portion of the aerosol generating substrate. The tipping wrapper comprises at least one cut extending around at least a portion of the tipping wrapper, an upstream tipping wrapper portion extending upstream from the at least one cut, and a downstream tipping wrapper portion extending downstream from the at least one cut. The upstream tipping wrapper portion is attached to a downstream portion of the aerosol generating substrate and an upstream portion of the mouthpiece, attaching the mouthpiece and the aerosol generating substrate to one another. The downstream tipping wrapper portion is not directly attached to the portion of the mouthpiece underlying the downstream tipping wrapper portion.

[0006] As used herein, the terms "upstream" and "downstream" are used to describe the relative positions of elements, or portions of elements, of the smoking article in relation to the direction in which a user draws on the smoking article during use thereof. Smoking articles as described herein comprise a downstream end (that is, the mouth end) and an opposed upstream end. In use, a user draws on the downstream end of the smoking article. The downstream end is downstream of the upstream end, which may also be described as the distal end.

[0007] The term "longitudinal direction" is used herein to refer to the direction extending between the upstream and downstream ends of the smoking article. Where the smoking article has a substantially cylindrical shape, the axis of the cylinder extends in the longitudinal direction. The "transverse direction" extends perpendicular to the longitudinal direction, and the "circumferential direction" extends around the longitudinal direction.

[0008] By providing the tipping wrapper with a portion that is downstream of at least one cut and not secured to the underlying mouthpiece, smoking articles according to the present invention provide a downstream tipping wrapper portion that can be removed by the consumer. The consumer can therefore handle the smoking article as normal when removing the article from a packet, for example, and subsequently remove the downstream tipping wrapper portion to reveal an 'untouched' surface of the mouthpiece than can be inserted into the consumer's mouth. Furthermore, the upstream portion of the tipping wrapper remains secured to the downstream end portion of the aerosol generating substrate and the upstream end portion of the mouthpiece so that the smoking article remains intact.

[0009] Therefore, advantageously, smoking articles in accordance with the present invention can be manufactured with little or no modification to existing manufacturing equipment, since the smoking article does not comprise any additional wrappers. Rather, a removable wrapper is formed by a downstream portion of the existing tipping wrapper. Furthermore, since an additional outer wrapper is not required in smoking articles according to the present invention, the consumer is provided with a choice as to whether or not they wish to remove the downstream tipping wrapper portion. Specifically, consumers have the option of leaving the downstream tipping wrapper portion on the smoking article and

smoking the article in the same manner as a conventional smoking article.

[0010] To ensure that removal of the downstream tipping wrapper portion reveals a sufficient portion of the underlying mouthpiece for insertion into the consumer's mouth, the length of the downstream tipping wrapper portion in the longitudinal direction is preferably at least about 10 millimetres, more preferably at least about 15 millimetres.

[0011] To ensure that the aerosol generating substrate and the mouthpiece remain secured together after the downstream tipping wrapper has been removed, the length of overlap in the longitudinal direction between the upstream tipping wrapper portion and the mouthpiece is preferably at least about 4 millimetres.

[0012] To secure the upstream tipping wrapper portion to the mouthpiece and the aerosol generating substrate, the smoking article may comprise an adhesive underlying the upstream tipping wrapper portion and securing the upstream tipping wrapper portion to the downstream portion of the aerosol generating substrate and the upstream portion of the mouthpiece. The smoking article is preferably free from adhesive between the downstream tipping wrapper portion and the portion of the mouthpiece underlying the downstream tipping wrapper portion to facilitate removal of the downstream tipping wrapper portion without damaging the mouthpiece.

[0013] To assist the consumer in removing the downstream tipping wrapper portion the at least one cut may comprise at least one row of perforations extending around the tipping wrapper. In this case, the consumer can remove the downstream tipping wrapper portion by rotating the downstream tipping wrapper portion to break the row of perforations and then sliding the downstream tipping wrapper portion in the downstream direction off the mouthpiece. This method of removing the downstream tipping wrapper portion is particularly effective in those embodiments in which the row of perforations is substantially linear.

[0014] The term "row of perforations" is used herein to mean a plurality of perforations that extend in a line around the tipping wrapper. The row of perforations extends generally in the circumferential direction when the tipping wrapper is wrapped around the mouthpiece. If the tipping wrapper is unwrapped, the row of perforations extends generally in the transverse direction.

[0015] The perforations in a row of perforations are spaced apart in the circumferential direction (or the transverse direction, where the tipping wrapper is not wrapped around the mouthpiece) by uncut segments between adjacent perforations. Adjacent perforations in the same row of perforations may also be spaced in the longitudinal direction. The maximum spacing in the longitudinal direction between adjacent perforations in the same row of perforations is about 0.3 millimetres, preferably about 0.2 millimetres, as measured between the closest longitudinally-spaced points between adjacent perforations.

[0016] In embodiments in which the at least one row of perforations comprises at least two rows of perforations, each perforation is spaced in the longitudinal direction from the nearest perforation in the adjacent row of perforations by at least about 0.3 millimetres, preferably at least about 0.4 millimetres.

[0017] In embodiments comprising at least one row of perforations, a low friction treatment may be applied between the downstream tipping wrapper portion and the portion of the mouthpiece underlying the downstream tipping wrapper portion to facilitate rotation of the downstream tipping wrapper portion. The low friction treatment can be applied to the outer surface of the mouthpiece, the inner surface of the downstream tipping wrapper portion, or both. The low friction coating is preferably provided only on the inner surface of the downstream tipping wrapper portion. The low friction coating treatment may include a low friction coating such as a lacquer (nitro cellulose or ethyl cellulose, for example), a polyolefin based wax, a polymeric coating, or a lubricant containing at least one of long-chain saturated fatty acids, fatty alcohols and tristearin. Additionally, or alternatively, the low friction treatment may include at least one of hydrous kaolin and talc as a filler, either mixed into the material forming the tipping wrapper, or mixed with a lacquer applied as a coating, or both. Additionally, or in the alternative, the low friction treatment may include calendering the inner surface of the material forming the tipping wrapper to provide a smoother surface in contact with the underlying portions of the mouthpiece.

[0018] As an alternative to rotating the downstream tipping wrapper portion to break the row of perforations, the consumer can pull on an edge of a seam in the downstream tipping wrapper portion to peel the downstream tipping wrapper portion from the mouthpiece, wherein the peeling action breaks the row of perforations. In this case, the row of perforations can have any suitable shape, such as linear, wave-shaped, including sawtooth wave, triangular wave, sinusoidal wave, as well as other non-linear shapes.

[0019] To provide another alternative means for removing the downstream tipping wrapper portion, the at least one cut may comprise two rows of perforations each extending around the tipping wrapper, wherein the two rows of perforations are spaced apart in the longitudinal direction to define a tear strip tipping wrapper portion between the two rows of perforations. In this case, the tear strip tipping wrapper portion is between the upstream and downstream tipping wrapper portions. That is, the downstream tipping wrapper portion extends between the downstream end of the tipping wrapper and the downstream row of perforations, and the upstream tipping wrapper portion extends between the upstream end of the tipping wrapper and the upstream row of perforations. To remove the downstream tipping wrapper portion, the consumer can first remove the tear strip tipping wrapper portion by pulling on an edge of a seam in the tipping wrapper to break both rows of perforations as the tear strip tipping wrapper portion is peeled from the mouthpiece. The

consumer can then slide the downstream tipping wrapper portion in the downstream direction off the mouthpiece. A low friction treatment may be applied between the downstream tipping wrapper portion and the portion of the mouthpiece underlying the downstream tipping wrapper portion, as described above.

[0020] To make it easier for the consumer to remove the tear strip and to prevent damage to the underlying mouthpiece, the tear strip tipping wrapper portion is preferably not attached to the mouthpiece. For example, in those embodiments in which an adhesive is provided between the upstream tipping wrapper portion and the underlying portions of the aerosol generating substrate and the mouthpiece, the smoking article is preferably free from adhesive between the tear strip tipping wrapper portion and the underlying portion of the mouthpiece.

[0021] In those embodiments in which the at least one cut comprises at least one row of perforations, each row of perforations preferably comprises a series of cuts in the tipping wrapper and an uncut segment between each consecutive pair of cuts. A "percentage of hold" for a row of perforations can be used as an indication of the strength of the row of perforations and is defined as:

$$percentage\ of\ hold = \frac{total\ length\ of\ uncut\ segments}{total\ length\ of\ uncut\ segments + total\ length\ of\ perforations} \times 100$$

wherein the length of each uncut segment is the shortest distance along the tipping wrapper between adjacent perforations, and wherein the length of each perforation is the shortest distance between the two circumferential extremities of the perforation. In the case of a circular perforation, the length of the perforation is the diameter of the circle.

[0022] The percentage of hold for a given row of perforations can be determined using the equation above after measuring the length of each perforation and the length of each uncut segment. The measurements can be made by viewing or imaging the row of perforations microscopically. A skilled person can readily determine the lengths of the perforations and the lengths of the uncut segments for a broken row of perforations as the individual perforations are still discernible between the broken portions of the uncut segments.

[0023] Preferably, the percentage of hold of each row of perforations is large enough to prevent premature breaking of the row of perforations during manufacture of the smoking article, but small enough to facilitate breaking of the row of perforations by the consumer. Therefore, each row of perforations preferably has a percentage of hold of between about 15 percent and about 40 percent, more preferably between about 15 percent and about 30 percent, more preferably between about 18 percent and about 25 percent.

[0024] The force required to break a row of perforations can be defined as the perforation strength. The perforation strength for a given row of perforations corresponds to the shear force in the direction along the row of perforations that is required to break the perforations. Perforation strength can be measured by attaching a first clamp to a first edge of the tipping wrapper on a first side of the row of perforations and attaching a second clamp to a second edge of the tipping wrapper on a second side of the row of perforations. The spacing between each of the clamps and the row of perforations is no more than 2 millimetres, and the test is conducted at 22 degrees Celsius and 60 percent relative humidity. The first and second clamps are then pulled away from each other to apply a shear force along the row of perforations. The shear force is increased incrementally until the row of perforations breaks, at which point the shear force corresponds to the perforation strength. The perforation strength is expressed as the shear force in Newtons per 150 millimetres, where the 150 mm refers to the length of the row of perforations.

[0025] An exemplary test apparatus for measuring perforation strength is illustrated in Figure 3, which shows a sheet of tipping wrapper material 100 comprising a row of perforations 102. First and second clamps 104, 106 are attached to the tipping wrapper material 100 either side of the row of perforations 102. The first and second clamps 104, 106 are then pulled away from each other in the direction of the arrows and the separation force is increased incrementally until the row of perforations breaks.

[0026] The perforation strength test is preferably conducted on a sample of tipping wrapper material having a row of perforations that is 150 millimetres long and which has not been processed to form a smoking article. However, the test can also be conducted on a sample tipping wrapper that has been removed from a smoking article. In this case, the wrapper should be peeled from the smoking article and the test conducted as above. Depending on the length of the row of perforations of the sample, the force required to break the row of perforations can be scaled to provide the perforation strength in Newtons per 150 millimetres. For example, a force of 2 Newtons required to break a tipping wrapper having a row of perforations with a total length of 25 millimetres can be scaled to give a perforation strength of 12 Newtons per 150 millimetres for the row of perforations.

[0027] For samples of tipping wrapper material that have not been processed to form a smoking article, each row of perforations preferably has a perforation strength of less than about 20 Newtons per 150 millimetres. Additionally, or alternatively, samples of unprocessed tipping wrapper material may have a perforation strength of at least about 1 Newton per 150 millimetres.

[0028] For tipping wrapper samples that have been removed from a smoking article, each row of perforations preferably has a perforation strength of less than about 10 Newtons per 150 millimetres. Additionally, or alternatively, tipping wrapper samples that have been removed from a smoking article may have a perforation strength of at least about 0.5 Newtons per 150 millimetres.

[0029] As an alternative to one or more rows of perforations, the at least one cut may comprise a continuous cut that extends around a substantial portion of the tipping wrapper. In such embodiments, the continuous cut preferably extends around at least about 50 percent of the circumference of the tipping wrapper, more preferably at least about 75 percent of the circumference of the tipping wrapper, most preferably at least about 85 percent of the circumference of the tipping wrapper. Preferably, the continuous cut extends around less than about 95 percent of the circumference of the tipping wrapper.

[0030] The at least one cut can be formed using any suitable cutting method and can be formed using an offline or an online process. For example, the at least one cut can be formed in an online process using a mechanical cutter or a laser to form cuts in a continuous sheet of material as it is pulled from a roll to form tipping wrappers. Alternatively, the at least one cut can be formed online after each tipping wrapper has been wrapped around the mouthpiece and the aerosol generating substrate, using a laser kiss-cutting technique, for example.

[0031] Preferably, the downstream tipping wrapper portion is connected to the upstream tipping wrapper portion by a portion of the material forming the tipping wrapper. For example, in those embodiments in which the at least one cut comprise a row of perforations, the downstream tipping wrapper portion is connected to the upstream tipping wrapper portion by the uncut segments of material between the consecutive perforations. By forming the smoking article so that the downstream tipping wrapper portion is connected to the upstream tipping wrapper portion, the consumer is required to break the connecting material before the downstream tipping wrapper portion can be removed. Therefore, premature removal of the downstream tipping wrapper portion is prevented, particularly if the consumer grasps the smoking article at the downstream tipping wrapper portion to remove the smoking article from a packet, for example.

[0032] To provide sufficient strength to the mouthpiece and to provide a desired level of stiffness for the consumer after the downstream tipping wrapper portion has been removed, the mouthpiece preferably comprises a mouthpiece wrapper circumscribing one or more mouthpiece segments, the mouthpiece wrapper having a basis weight of at least about 50 grams per square metre, preferably at least about 70 grams per square metre. The mouthpiece wrapper preferably has a basis weight of less than about 125 grams per square metre. Suitable mouthpiece wrappers include high basis weight plug wraps, also known as 'stiff' plug wraps. Preferably, the mouthpiece wrapper comprises a coating provided on at least a portion of an outer surface of the mouthpiece wrapper facing the tipping wrapper. The coating is preferably provided on at least a downstream portion of the outer surface underlying the downstream tipping wrapper portion. The coated surface of the mouthpiece wrapper provides a similar sensation against the consumer's lips as the tipping wrapper. Suitable coating materials include lacquers, such as lip-release lacquers that may be applied to conventional tipping wrappers.

[0033] In some embodiments, the downstream tipping wrapper portion extends downstream of the downstream end of the mouthpiece to define a recess at the mouth end of the smoking article. Providing a recess at the mouth end may provide an additional surface of the downstream tipping wrapper portion which the consumer can grasp to effect removal of the downstream tipping wrapper portion from the smoking article. In some embodiments, the mouth end edge of the downstream tipping wrapper portion is not perpendicular to the longitudinal direction of the smoking article. Additionally, or alternatively, the mouth end edge of the downstream tipping wrapper portion may define a non-linear shape, such as a wave shape. For example, in some embodiments the mouth end edge of the downstream tipping wrapper may be shaped to form a tab which the consumer can grasp to remove the downstream tipping wrapper portion from the smoking article.

[0034] The tipping wrapper may be formed from a paper material, such as standard tipping paper. The tipping wrapper preferably has a basis weight of less than about 70 grams per square metre, more preferably less than about 50 grams per square metre. The tipping wrapper preferably has a basis weight of more than about 20 grams per square metre.

[0035] Smoking articles according to the present invention may be filter cigarettes or other smoking articles in which a tobacco material is combusted to form smoke. Alternatively, smoking articles according to the present invention may be articles in which a tobacco material is heated to form an aerosol, rather than combusted. In one type of heated smoking article, a tobacco material is heated by one or more electrical heating elements to produce an aerosol. In another type of heated smoking article, an aerosol is produced by the transfer of heat from a combustible or chemical heat source to a physically separate tobacco material, which may be located within, around or downstream of the heat source. The present invention further encompasses smoking articles in which a nicotine-containing aerosol is generated from a tobacco material, tobacco extract, or other nicotine source, without combustion, and in some cases without heating, for example through a chemical reaction.

[0036] The present invention also extends to a method of manufacturing smoking articles in accordance with any of the embodiments described above. Accordingly, the present invention also provides a method of manufacturing a smoking article, the method comprising steps of providing an aerosol generating substrate and a mouthpiece in axial alignment

with the aerosol generating substrate. A tipping wrapper comprising at least one cut extending across at least a portion of the tipping wrapper is provided and wrapped around the mouthpiece and at least a portion of the aerosol generating substrate. Only the portion of the tipping wrapper upstream of the at least one cut is secured to the mouthpiece and the aerosol generating substrate. As such, the tipping wrapper comprises the at least one cut extending around at least a portion of the tipping wrapper in the first direction, an upstream tipping wrapper portion extending upstream from the at least one cut and a downstream tipping wrapper portion extending downstream from the at least one cut. The upstream tipping wrapper portion is attached to a downstream portion of the aerosol generating substrate and an upstream portion of the mouthpiece, and the downstream tipping wrapper portion is not directly attached to the portion of the mouthpiece underlying the downstream tipping wrapper portion.

[0037] The at least one cut may comprise at least one row of perforations extending around the tipping wrapper, as described above. In some embodiments, the at least one row of perforations comprises two rows of perforations each extending around the tipping wrapper, the two rows of perforations spaced apart in the longitudinal direction to define a tear strip tipping wrapper portion between the two rows of perforations. In this case, the tear strip tipping wrapper portion is between the upstream and downstream tipping wrapper portions. That is, the downstream tipping wrapper portion extends between the downstream end of the tipping wrapper and the downstream row of perforations, and the upstream tipping wrapper portion extends between the upstream end of the tipping wrapper and the upstream row of perforations.

[0038] Preferably, each row of perforations has a percentage of hold of between about 15 percent and about 40 percent, more preferably between about 15 percent and about 30 percent, more preferably between about 18 percent and about 25 percent. Additionally, or alternatively, each row of perforations preferably has a perforation strength of less than about 20 Newtons per 150 millimetres.

[0039] As described above, the mouthpiece preferably comprises a mouthpiece wrapper circumscribing one or more mouthpiece segments, the mouthpiece wrapper having a basis weight of at least about 50 grams per square metre, preferably at least about 70 grams per square metre. The mouthpiece wrapper preferably has a basis weight if less than about 125 grams per square metre.

[0040] The method may further comprise a step of providing an adhesive only on the upstream tipping wrapper portion, wherein the step of providing the adhesive is performed before the step of wrapping the tipping paper. In this case, the step of securing the upstream tipping wrapper portion to the upstream end portion of the mouthpiece and the downstream end portion of the aerosol generating substrate comprises contacting the upstream end portion of the mouthpiece and the downstream end portion of the aerosol generating substrate with the adhesive. No adhesive is provided between the downstream tipping wrapper portion and the mouthpiece, so that the downstream tipping wrapper portion can be removed easily and without damaging the mouthpiece.

[0041] The present invention will now be further described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 shows a smoking article in accordance with an embodiment of the present invention;
Figure 2 shows the smoking article of Figure 1 with the downstream tipping wrapper portion partially removed; and
Figure 3 shows an exemplary test apparatus for measuring perforation strength, as described above.

[0042] Figure 1 shows a filter cigarette 10 comprising a tobacco rod 12 and a mouthpiece 14 comprising a plug of filtration material 16 axially aligned with the tobacco rod 12. A downstream end of the tobacco rod 12 abuts an upstream end of the mouthpiece 14 along the line 18 shown in Figure 1.

[0043] A tipping wrapper 20 comprising a row of perforations 22 is wrapped around the mouthpiece 14 and a portion of the tobacco rod 12 so that an upstream tipping wrapper portion 24 extends upstream from the row of perforations 22, and a downstream tipping wrapper portion 26 extends downstream of the row of perforations 22. Only the upstream tipping wrapper portion 24 is glued to the underlying portions of the tobacco rod 12 and the mouthpiece 14. The downstream tipping wrapper portion 26 is not glued to the underlying mouthpiece 14 and is secured to the smoking article 10 only along the row of perforations 22 where it is secured to the upstream tipping wrapper portion 24.

[0044] Prior to smoking the smoking article 10, the consumer can remove the downstream tipping wrapper portion 26, if desired. To remove the downstream tipping wrapper portion 26 the consumer can grasp the downstream tipping wrapper portion 26 at the seam in the tipping wrapper 20. The consumer can then peel the downstream tipping wrapper portion 26 away from the mouthpiece 14 by breaking the row of perforations 22. Figure 2 shows the smoking article 10 with the downstream tipping wrapper portion 26 partially removed. To maintain the required stiffness of the mouthpiece 14 after the downstream tipping wrapper portion 26 has been removed, the plug of filtration material 16 is wrapped in a stiff plug wrap 28.

Claims

1. A smoking article comprising:

an aerosol generating substrate;
a mouthpiece in axial alignment with the aerosol generating substrate; and
a tipping wrapper wrapped around the mouthpiece and at least a portion of the aerosol generating substrate, the tipping wrapper comprising:

at least one cut extending around at least a portion of the tipping wrapper;
an upstream tipping wrapper portion extending upstream from the at least one cut, wherein the upstream tipping wrapper portion is attached to a downstream portion of the aerosol generating substrate and an upstream portion of the mouthpiece; and
a downstream tipping wrapper portion extending downstream from the at least one cut, wherein the downstream tipping wrapper portion is not directly attached to the portion of the mouthpiece underlying the downstream tipping wrapper portion.

2. A smoking article according to claim 1, wherein the at least one cut comprises at least one row of perforations extending around the tipping wrapper.

3. A smoking article according to claim 1 or 2, wherein the at least one cut comprises two rows of perforations each extending around the tipping wrapper, the two rows of perforations spaced apart in a longitudinal direction of the smoking article to define a tear strip tipping wrapper portion between the two rows of perforations, and wherein the tear strip tipping wrapper portion is between the upstream and downstream tipping wrapper portions.

4. A smoking article according to claim 2 or 3, wherein each row of perforations comprises uncut segments of tipping wrapper between consecutive perforations, and wherein the total length of the uncut segments defines a percentage of hold of between 15 percent and 40 percent of the total length of the row of perforations.

5. A smoking article according to claim 2, 3 or 4, wherein each row of perforations has a perforation strength of less than 10 Newtons per 150 millimetres as measured when the tipping wrapper is removed from the smoking article.

6. A smoking article according to any preceding claim, wherein the mouthpiece comprises a mouthpiece wrapper circumscribing one or more mouthpiece segments, the mouthpiece wrapper defining the portion of the mouthpiece underlying the downstream portion of the tipping wrapper, the mouthpiece wrapper having a basis weight of at least 50 grams per square metre.

7. A smoking article according to any preceding claim, further comprising an adhesive underlying the upstream tipping wrapper portion and securing the upstream tipping wrapper portion to the downstream portion of the aerosol generating substrate and the upstream portion of the mouthpiece, and wherein the smoking article is free from adhesive between the downstream tipping wrapper portion and the portion of the mouthpiece underlying the downstream tipping wrapper portion.

8. A smoking article according to any preceding claim, wherein the downstream tipping wrapper portion extends downstream of the downstream end of the mouthpiece to define a recess at the mouth end of the smoking article.

9. A method of manufacturing a smoking article, the method comprising:

providing an aerosol generating substrate;
providing a mouthpiece in axial alignment with the aerosol generating substrate;
providing a tipping wrapper comprising at least one cut extending across at least a portion of the tipping wrapper;
wrapping the tipping wrapper around the mouthpiece and at least a portion of the aerosol generating substrate; and
securing only a portion of the tipping wrapper upstream of the at least one cut to the mouthpiece and the aerosol generating substrate so that the tipping wrapper comprises:

the at least one cut extending around at least a portion of the tipping wrapper in the first direction;
an upstream tipping wrapper portion extending upstream from the at least one cut, wherein the upstream

tipping wrapper portion is attached to a downstream portion of the aerosol generating substrate and an upstream portion of the mouthpiece; and

a downstream tipping wrapper portion extending downstream from the at least one cut, wherein the downstream tipping wrapper portion is not directly attached to the portion of the mouthpiece that is underlying the downstream tipping wrapper portion.

10. A method according to claim 9, wherein the at least one cut comprises at least one row of perforations extending around the tipping wrapper.

11. A method according to claim 9 or 10, wherein the at least one cut comprises two rows of perforations each extending around the tipping wrapper, the two rows of perforations spaced apart in a longitudinal direction of the smoking article to define a tear strip tipping wrapper portion between the two rows of perforations, and wherein the tear strip tipping wrapper portion is between the upstream and downstream tipping wrapper portions.

12. A method according to claim 10 or 11, wherein each row of perforations comprises uncut segments of tipping wrapper between consecutive perforations, and wherein the total length of the uncut segments defines a percentage of hold of between 15 percent and 40 percent of the total length of the row of perforations.

13. A method according to claim 10, 11 or 12, wherein each row of perforations has a perforation strength of less than 20 Newtons per 150 millimetres as measured before the tipping wrapper is processed to form the smoking article.

14. A method according to any of claims 9 to 13, wherein the mouthpiece comprises a mouthpiece wrapper circumscribing one or more mouthpiece segments, the mouthpiece wrapper having a basis weight of at least 50 grams per square metre.

15. A method according to any of claims 9 to 14, further comprising a step of providing an adhesive only on the upstream tipping wrapper portion, wherein the step of providing the adhesive is performed before the step of wrapping the tipping paper, and wherein the step of securing the upstream tipping wrapper portion to the upstream end portion of the mouthpiece and the downstream end portion of the aerosol generating substrate comprises contacting the upstream end portion of the mouthpiece and the downstream end portion of the aerosol generating substrate with the adhesive.

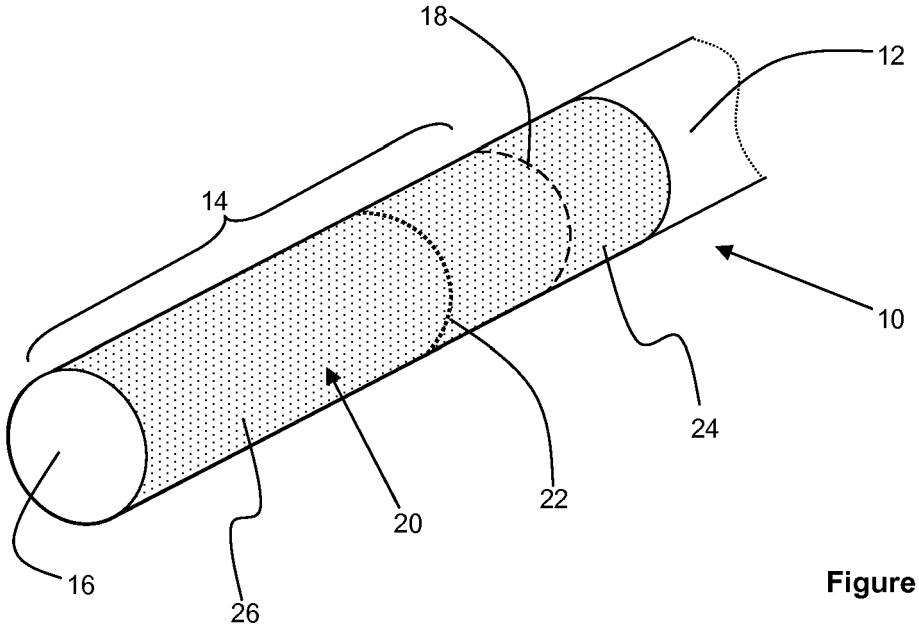

Figure 1

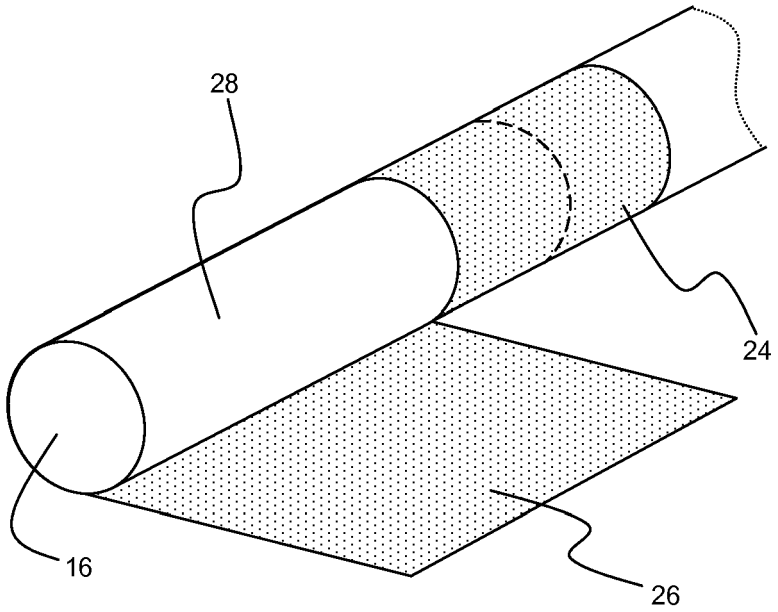

Figure 2

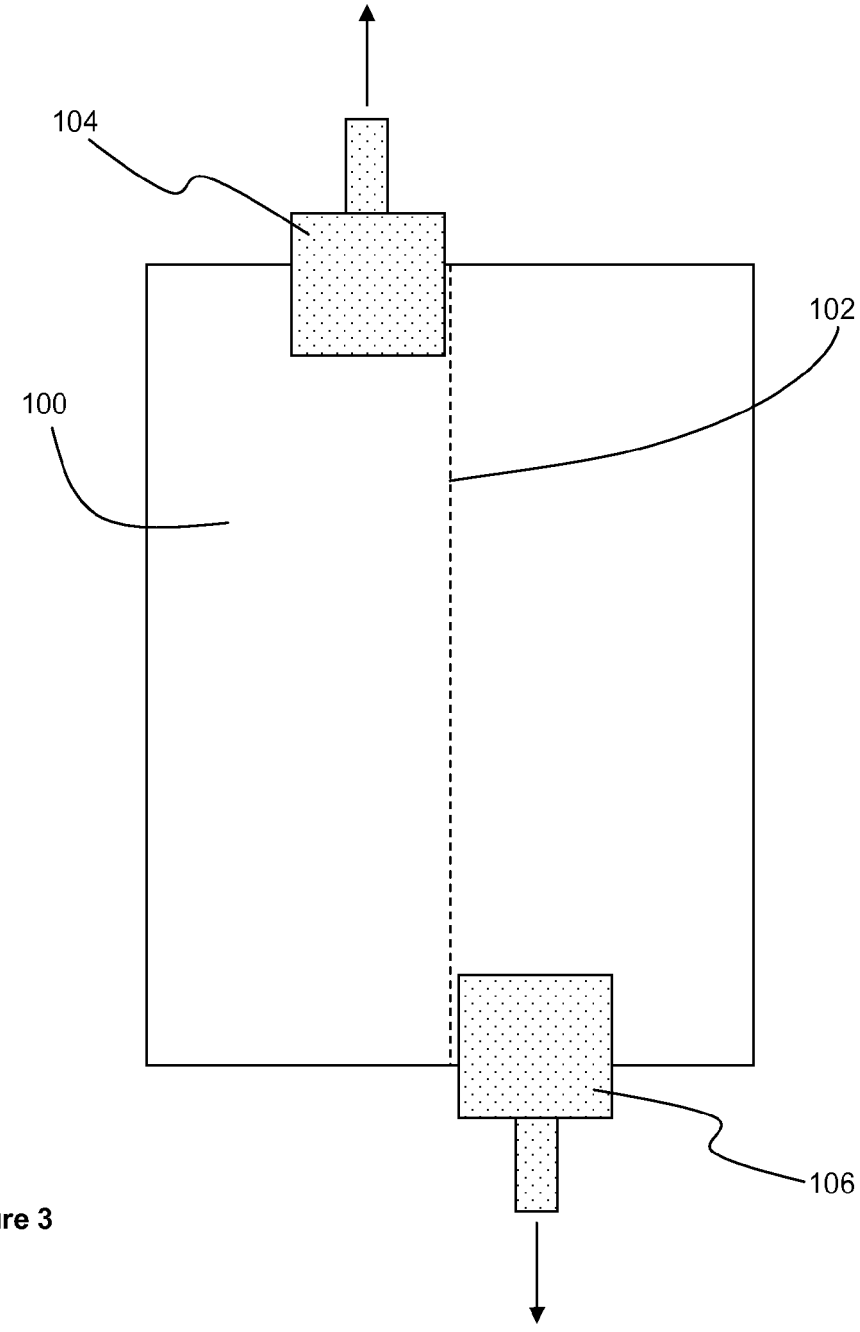

Figure 3

Europäisches Patentamt
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EUROPEAN SEARCH REPORT

Application Number
EP 13 19 9594

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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Place of search	Date of completion of the search	Examiner
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