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(54) Smoking article having outer wrapper with cut-out portion

(57) A smoking article (10)(30)(50) comprises an aerosol generating substrate(12)(32); a mouthpiece (14)(34)(54) in axial alignment with the aerosol generating substrate, the mouthpiece comprising one or more segments (16)(36,38,40)(56,58,60); a substantially transparent wrapper (18)(42)(64) circumscribing the mouthpiece along at least a part of the length of the mouthpiece; and an outer wrapper (20)(44)(66) circumscribing the mouthpiece. The outer wrapper (20)(44)(66) overlies the substantially transparent wrapper (18)(42)(64) and comprises at least one cut-out portion (22)(46)(68,68') extending around less than the full circumference of the mouthpiece (14)(34)(54) and exposing an area of the substantially transparent wrapper (18)(42)(64), through which an underlying portion of the mouthpiece is visible.

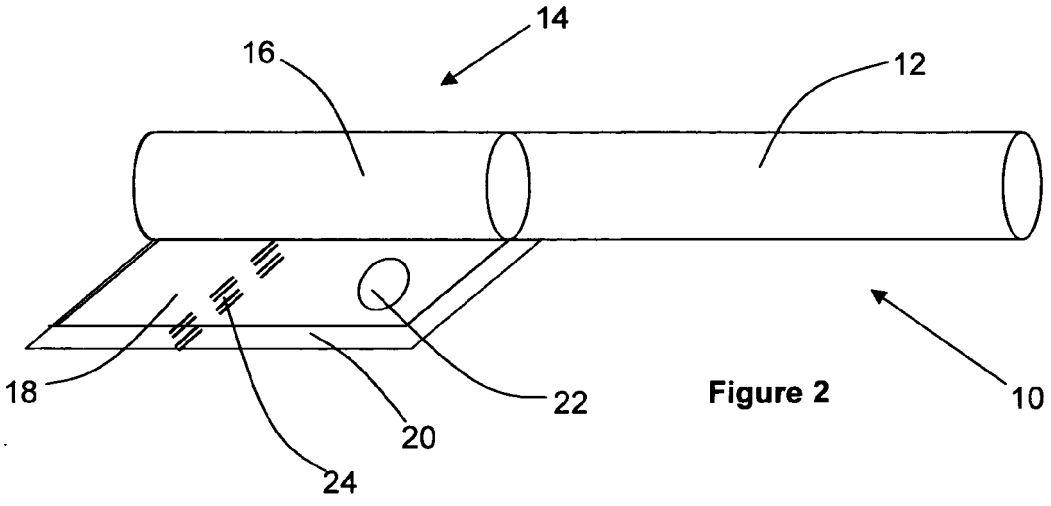

Figure 2

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Description

[0001] The present invention relates to a novel smoking article having a mouthpiece circumscribed by an outer wrapper with a cut-out portion for viewing a part of the mouthpiece, and to a method for producing such a smoking article.

[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. Conventionally, the wrapped tobacco rod and the filter are joined by a tipping wrapper, typically formed of a band of 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.

[0004] It has previously been proposed to provide a wrapper on a smoking article that is at least partially formed of a transparent material, such that at least a part of the smoking article is visible through the wrapper. For example, US-A-5,396,909 discloses a filter with a tipping wrapper formed of a transparent sheet or film material, such as a transparent polymeric or cellulose material, which allows the consumer to observe the effectiveness of the underlying filter. WO-A-2009/106374 similarly discloses a filter with a tipping wrapper formed of a transparent material, but wherein an opaque coating is applied to a portion of the tipping wrapper so that only part of the underlying filter is visible.

[0005] However, it has been found that the use of such transparent, polymeric or cellulosic materials can be unappealing to the consumer, due to the different mouth feel of the material compared with traditional tipping paper. In particular, the texture of the transparent materials is typically very different to that of a paper material and gives a different feel to the consumer when the filter is placed against the lips during smoking.

[0006] It would be desirable to provide a smoking article having novel, alternative means for allowing the consumer to view a part of the smoking article but which provides an outer wrapper having a more acceptable feel against the lips. It would be particularly desirable if such a smoking article could be assembled using standard wrapping apparatus and techniques.

[0007] According to the invention there is provided a smoking article comprising: an aerosol generating substrate; a mouthpiece in axial alignment with the aerosol generating substrate, the mouthpiece comprising one or more segments; a substantially transparent wrapper circumscribing the mouthpiece along at least a part of the length of the mouthpiece; and an outer wrapper circumscribing the mouthpiece. The outer wrapper overlies the substantially transparent wrapper and comprises at least one cut-out portion extending around less than the full circumference of the mouthpiece and exposing an area of the substantially transparent wrapper, through which an underlying portion of the mouthpiece is visible.

[0008] The term 'substantially transparent' is used to describe a material which allows at least a significant proportion of incident light to pass through it, so that it is possible to see through the material. In the present invention, the substantially transparent wrapper allows sufficient light to pass through it that the mouthpiece is visible through the wrapper. The substantially transparent wrapper may be completely transparent. Alternatively, the wrapper may have a lower level of transparency whilst still transmitting sufficient light that the mouthpiece is visible through the wrapper.

[0009] The thickness of the substantially transparent wrapper is preferably at least 25 micrometers, and more preferably between 25 micrometers and 75 micrometers. The basis weight of the substantially transparent wrapper is preferably at least 40 grams per square meter (gsm), and more preferably between 40 gsm and 80 gsm. Suitable materials for use as the substantially transparent wrapper of the smoking articles according to the present invention include but are not limited to cellophane and polypropylene. Different grades, thicknesses and basis weights of suitable substantially transparent materials are commercially available from various sources. For example, Innovia Films Ltd. makes a variety of different grades of such materials.

[0010] In some cases, the substantially transparent wrapper may be tinted or coloured, or may have a repeating pattern or other type of graphic applied thereto. For example, the substantially transparent wrapper may have a pattern embossed on the surface. The embossed pattern lowers the surface area of the substantially transparent wrapper that contacts the lips of a consumer, reducing any unappealing mouth feel of the substantially transparent wrapper. In some cases, the image of the area of the mouthpiece that is visible through the cut-out portion in the outer wrapper will be visually altered by the substantially transparent wrapper.

[0011] In smoking articles according to the present invention, a portion of the mouthpiece is visible to the consumer through the window formed by the cut-out portion in the outer wrapper and the underlying area of the substantially transparent wrapper. The outer wrapper does not need to be formed of a transparent material and can therefore be formed of an alternative material that provides desirable textural and surface properties. Prefera-

bly, the outer wrapper is opaque. Preferably, the outer wrapper is a tipping paper formed of a cellulosic paper sheet material, as in conventional cigarettes. In this way, the outer wrapper provides a familiar texture and mouth feel to the consumer.

[0012] The position and size of the cut-out portion in the outer wrapper can advantageously be provided such that the substantially transparent wrapper exposed through the cut-out portion does not come into contact with the lips of the consumer during smoking. However, even if the cut-out portion does come into contact with the lips of the consumer during smoking, the exposed surface area of the substantially transparent wrapper is typically small compared with the surface area of tipping wrappers that are entirely constructed from a transparent film material. This relatively small surface area limits the adverse feel that can result from the use of substantially transparent films.

[0013] The at least one cut-out portion extends around less than the full circumference of the mouthpiece, such that the outer wrapper can be conveniently formed of a single piece of sheet material which can be wrapped around the mouthpiece using standard apparatus and techniques. The outer wrapper remains an integral outer wrapper even once the cut-out portion has been removed from the outer wrapper.

[0014] The at least one cut-out portion may be any suitable shape, including but not limited to a circle, oval, square, triangle, diamond or rectangle. A single cut-out portion may be provided in the outer wrapper, or two or more cut-out portions may be provided which are spaced from each other in the longitudinal direction of the smoking article, or the circumferential direction of the smoking article, or both. This enables the consumer to view different parts or segments of the mouthpiece, which may or may not have the same appearance as each other. For example, where the mouthpiece has a plurality of different segments, the cut-out portions may be positioned so that a number of the segments are visible. Where two or more cut-out portions are provided, the cut-out portions may be the same size and shape, or at least one of the size and shape may be different.

[0015] The outer wrapper is provided over the substantially transparent wrapper and is preferably glued or laminated onto the substantially transparent wrapper.

[0016] Smoking articles according to the present invention may be filter cigarettes or other smoking articles in which tobacco material or another combustible material is combusted to form smoke. Alternatively, smoking articles according to the present invention may be articles in which material is heated to form an aerosol, rather than combusted. In one type of heated smoking article, tobacco material or another aerosol forming 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 aerosol forming material, which may be located within, around or downstream of the heat source.

[0017] In certain preferred embodiments of the present invention, the aerosol generating substrate of the smoking article comprises a tobacco rod and the mouthpiece comprises a filter including one or more filter segments. Preferably, the substantially transparent wrapper and the outer wrapper both circumscribe the one or more filter segments along at least a part of the length of the filter such that an underlying portion of the filter is visible through the cut-out portion in the outer wrapper. In one particularly preferred embodiment, the outer wrapper is a tipping paper which joins the tobacco rod to the filter.

[0018] Where the mouthpiece of smoking articles according to the invention comprises a filter, the filter may be formed of a single segment or may be a multi-segment filter comprising two or more filter segments which are connected in a longitudinal direction. Where two or more filter segments are provided, the filter segments may be of the same construction and materials as each other but more preferably have a different construction, or contain different filtration material or additives. The position of the cut-out portion in the outer wrapper can be adjusted in order to select which of the filter segments is visible.

[0019] The substantially transparent wrapper may circumscribe the filter along the entire length of the filter. Alternatively, the substantially transparent wrapper may circumscribe the filter along only a part of the length of the filter. In the latter case, the substantially transparent wrapper should circumscribe the filter segment or the portion of the filter segment underlying the cut-out portion in the outer wrapper in the assembled smoking article.

[0020] Preferably, the at least one cut-out portion in the outer wrapper is provided at least 2 mm from the circumferential edge of the outer wrapper adjacent the rod end of the filter, more preferably at least 5 mm. Where the outer wrapper is a tipping wrapper extending along the tobacco rod by between about 2 mm and 5 mm from the rod end of the filter, this spacing of the cut-out portion ensures that the cut-out portion overlies the filter rather than the tobacco rod.

[0021] Where the filter comprises a single segment, the substantially transparent wrapper may be a plug wrap surrounding the filter material. Where the filter comprises two or more segments, the segments are typically wrapped in a plug wrap. Any or all of the two or more segments may each be individually wrapped in a plug wrap. Preferably, the filter segment underlying the cut-out portion in the outer wrapper is circumscribed by a substantially transparent plug wrap. The filter segment or segments that are not visible through the cut-out portion in the outer wrapper may be wrapped in an opaque, paper plug wrap in the conventional manner. The segments of the filter may then be subsequently attached to one another in a conventional manner using a substantially transparent wrapper.

[0022] In certain preferred embodiments of the present invention, the mouthpiece comprises a multi-segment filter including a filter segment comprising filtration material

and a particulate material dispersed through the filtration material, wherein a portion of the said filter segment is visible through the at least one cut-out window in the outer wrapper. In such embodiments, the particulate material within the filter segment is preferably visible to the consumer.

[0023] Preferably, the filtration material within the filter segment is a plug of fibrous filtration material, such as cellulose acetate tow or paper. A filter plasticiser may be applied to the fibrous filtration material in a conventional manner, by spraying it onto the separated fibres, preferably before applying the particulate material to the filtration material.

[0024] Alternatively or in addition to the filter segment described above, the multi-segment filter may include a hollow cavity at least partially filled with a particulate material, wherein a portion of the at least partially filled cavity is visible through the at least one cut-out window in the outer wrapper. The particulate material within the cavity is therefore preferably visible to the consumer. In such embodiments, the hollow cavity is preferably provided between two plugs of a filtration material.

[0025] Preferably, between 40% and 100% of the volume of the cavity is filled with particulate material, more preferably between 60% and 80% of the volume of the cavity. Cavity filters according to the second aspect of the invention may be produced using known machinery and techniques for producing charcoal filters. In one such technique, two plugs of filtration material are placed on a substantially transparent wrapper material with a space between them. The space between them is at least partially filled with the particulate material, and then the substantially transparent wrapper is wrapped around the plugs, forming a cavity between the plugs that is at least partially filled with the particulate material. A detailed process is described, for example, in EP-A-1,571,933. Machinery for performing these manufacturing methods is available from Filtrona International Ltd., Great Britain.

[0026] The particulate material incorporated into the filter segments described above may include at least one sorbent capable of removing at least one gas phase constituent from mainstream smoke drawn through the filter. Preferably, the at least one sorbent is selected from the group consisting of activated carbon, carbon beads, active aluminium, zeolites, sepiolites, molecular sieves and silica gel.

[0027] Alternatively or in addition to the at least one sorbent, the particulate material may include at least one flavourant material. For example, the particulate flavourant material may include particles of a sorbent or cellulosic material impregnated with a liquid flavourant. Alternatively, the particulate flavourant material may comprise particles of plant material. The plant material may be in the form of plant leaf, as described in EP-A-1,958,523. For example, the filter segment may include leaf from tobacco, green tea, peppermint, spearmint, laurel, eucalyptus, basil, sage, verbena and tarragon. In addition, portions of mint plants may also be used. The term 'mint' refers to plants that belong to the genus *Mentha.* The plant material may alternatively be in the form of a seed, root, bark or flower, such as those typically used as spices.

[0028] Smoking articles according to the present invention may include a variety of different types of filter segments or combinations of filter segments, including those described above as well as other types of filter segments that would be known to the skilled person, such as segments including restrictors and segments that are used for adjusting the resistance to draw (RTD).

[0029] Preferably, the at least one cut-out portion in the outer wrapper is provided at least 10 mm from the mouth end of the smoking article. This spacing helps to avoid any contact between the lips of the consumer and the area of the substantially transparent wrapper that is exposed through the cut-out portion, during smoking.

[0030] Preferably, at least one circumferential row of perforations is provided at a location along the smoking article, wherein the perforations extend through the substantially transparent wrapper, if present at that location, and the outer wrapper. This provides ventilation to the smoking article, so that the mainstream smoke is mixed with ambient air during smoking. The substantially transparent wrapper will typically be non-porous and so where the substantially transparent wrapper underlies the location at which the perforations are provided, the perforations must extend through the substantially transparent wrapper as well as the outer wrapper. Where the mouthpiece comprises a filter, the circumferential rows of perforations are preferably provided at a location along the filter.

[0031] Preferably, the at least one circumferential row of perforations is located upstream of the cut-out portion in the outer wrapper. The term "upstream" is used to describe the relative positions of features of the smoking articles according to the invention in relation to the direction of mainstream smoke or air drawn from the aerosol generating substrate through the mouthpiece during use. The upstream location of the perforations advantageously minimises the deposition of particulate matter onto the substantially transparent wrapper underlying the cut-out portion, which could otherwise affect the visibility of the filter through the cut-out portion in the outer wrapper.

[0032] Where the mouthpiece comprises a filter, preferably, the perforations are provided between 9 mm and 20 mm from the mouth end of the filter. More preferably, the perforations are provided approximately 12 mm from the mouth end of the filter. This prevents the blocking or occlusion of the perforations by the consumer's lips during smoking.

[0033] The present invention further provides a method of producing a smoking article according to the invention, as described above, the method comprising: providing a plurality of discrete, wrapped filters wrapped with a substantially transparent wrapper, the filters comprising one or more filter segments; providing a rod of wrapped tobacco; providing a sheet of outer wrapper

having a succession of cut-out portions therein; disposing one of the wrapped filters in axial alignment with one of the tobacco rods; and wrapping the sheet of outer wrapper around at least a portion of a wrapped filter and at least a portion of an adjacent tobacco rod such that the outer wrapper attaches the wrapped filter to the tobacco rod and the cut out portion overlies the substantially transparent wrapper.

[0034] The cut-out portions in the outer wrapper may be provided using any suitable means, including for example laser cutting or rotary die-cutting or punching methods. Suitable apparatus for laser cutting includes the High-Speed Laser Die Cutting Machine or Finecut-Plus-Rotary™ System from Spartanics of Illinois, USA. Suitable apparatus for rotary die-cutting or rotary punching includes the Small Web Punching Machine from Schober GmbH of Germany. The cutting of the outer wrapper to provide the cut-out portions is preferably carried out on a continuous sheet of the wrapper material, prior to the cutting of the material to form discrete outer wrappers for each smoking article. However, it may also be possible to use certain cutting techniques with which the cut-out portions can be formed in the outer layer only, once the tipping material is in place around the mouthpiece.

[0035] The cutting of the outer wrapper to provide the cut-out portions may be carried out online on a cigarette maker, by incorporating cutting apparatus at any position on the machine after the outer wrapper has been unwound and before the outer wrapper is wrapped around the smoking article components.

[0036] Alternatively, the cutting of the outer wrapper to provide the cut-out portions may be carried out offline from the cigarette maker, using separate apparatus which may be provided at the same or a different location to the cigarette maker. In this case, the steps of the method of the present invention can be carried out using standard wrapping techniques and apparatus to apply the novel arrangement of the substantially transparent wrapper and outer wrapper with cut-out portions.

[0037] The spacing of the cut-out portions in the outer wrapper can be adjusted according to the number and desired position of cut-out portions in each smoking article.

[0038] The continuous sheet of tipping material is cut to form discrete, individual outer wrappers for individual smoking articles, each having the cut-out portion provided in the desired position. The cutting of the outer wrapper may take place before the outer wrapper is wrapped around the smoking article. Alternatively, the smoking articles can be formed two at a time in a known manner. For example, a filter rod comprising the filter segments for more than one filter may have a tobacco rod placed at both ends of the filter rod. A piece of outer wrapper tipping material may be wrapped around the filter rod and an adjacent portion of both of the tobacco rods. In this process, the cut-out in the outer wrapper is positioned to overlie the portion of the filter that is desired to be visible. After wrapping, the piece of outer wrapper tipping material and the filter rod are cut to form the two adjacent smoking articles.

[0039] A suitable vision system, including for example one or more cameras, is preferably used to ensure registration of the cut-out portions in the desired position on the filter of the smoking articles.

[0040] Where circumferential lines of perforations are provided in the outer wrapper and the substantially transparent wrapper (where present at the position of the perforations), the perforations are preferably provided online using a known laser technique. The position of the perforations is registered so that the perforations are at least 9 mm and preferably at least 12 mm from the mouth end of the smoking article.

[0041] According to the invention there is also provided use of an outer wrapper on a smoking article comprising an aerosol generating substrate and a mouthpiece, wherein the outer wrapper comprises at least one cut-out portion extending around less than the full circumference of the mouthpiece.

[0042] The invention will now be further described with reference to the following drawings in which:

Figure 1 shows a smoking article according to a first embodiment of the present invention;

Figure 2 shows the smoking article of Figure 1 with the filter unwrapped;

Figure 3 shows a plan view of the outer wrapper of the smoking articles shown in Figures 1 and 2 (not to scale);

Figure 4 shows a smoking article according to a second embodiment of the present invention with the filter unwrapped; and

Figure 5 shows a smoking article according to a third embodiment of the present invention with the filter unwrapped.

[0043] The filter cigarette 10 shown in Figures 1 and 2 comprises a wrapped rod 12 of tobacco cut filler which is attached at one end to an axially aligned filter 14 comprising a single filter segment 16 formed of cellulose acetate tow which has been wrapped with a substantially transparent wrapper in the form of substantially transparent plug wrap 18. The wrapped tobacco rod 12 and the filter 14 are joined by an outer wrapper 20 formed of tipping paper, which circumscribes the entire length of the filter 14 and an adjacent portion of the tobacco rod 12.

[0044] The outer wrapper 20 comprises a circular cut-out portion 22 having a diameter of approximately 5 mm which is positioned approximately 5 mm from the rod end of the outer wrapper. The underlying substantially transparent plug wrap 18 is exposed through the cut-out portion 22 in the outer wrapper 20 and an area of the filter is therefore visible through the cut-out portion 22.

[0045] Circumferential rows of perforations 24 are provided approximately 12 mm from the mouth end of the cigarette 10.

[0046] The filter cigarette 30 shown in Figure 4 comprises a wrapped rod 32 of tobacco cut filler which is attached to an axially aligned filter 34 comprising three filter segments in abutting end-to-end relationship: a mouth end segment 36, distant from the wrapped tobacco rod 32; a flavour release segment 38, located upstream of the mouth end segment 36; and a rod end segment 40 adjacent to and abutting the wrapped tobacco rod 32 and located upstream of the first flavour release segment 38.

[0047] The mouth end segment 36 comprises a plug of cellulose acetate tow of low filtration efficiency. The flavour release segment 38 comprises a plug of cellulose acetate tow through which particles of cut peppermint leaf have been substantially uniformly dispersed. The rod end segment 40 comprises a plug of cellulose acetate tow of medium to low filtration efficiency loaded with activated carbon. The mouth end segment 36 and the rod end segment 40 are each wrapped with a porous plug wrap (not shown), in a known manner. The flavour release segment 38 is wrapped with a substantially transparent plug wrap 39.

[0048] The combined filter segments are wrapped with a substantially transparent wrapper 42 which circumscribes the entire length of the filter 34. The wrapped tobacco rod 32 and the wrapped filter 34 are joined by an outer wrapper 44 formed of tipping paper, which circumscribes the entire length of the filter 34 and an adjacent portion of the tobacco rod 32.

[0049] The outer wrapper 44 comprises a diamond shaped cut-out portion 46 which is provided at a position overlying the flavour release segment 38 and is approximately halfway along the length of the filter 34. As described above in relation to cigarette 10, an area of the filter surface is visible through the substantially transparent plug wrap and the substantially transparent wrapper 42 beneath the cut-out portion 46. The particles of peppermint leaf within the plug of cellulose tow forming the flavour release segment are therefore visible.

[0050] The filter cigarette 50 shown in Figure 5 has a similar construction to the cigarette 30 shown in Figure 4 except that in place of the flavour release segment 38 the cigarette 50 comprises a cavity 58 filled with activated carbon particles, provided between the mouth end segment 56 and the rod end segment 60. In addition, the mouth end segment 56 comprises a central flavour thread 62 loaded with a liquid flavourant, for example, a menthol flavourant.

[0051] Each of the mouth end 56 and rod end 60 segments are wrapped with a porous plug wrap (not shown), in a known manner. The filter segments are then wrapped in a substantially transparent wrapper 64 which also forms the cavity in the filter 54. The wrapped tobacco rod and the filter 54 are joined by an outer wrapper 66 of tipping paper, as described above in relation to cigarette 30.

[0052] The outer wrapper 66 includes a square cut-out portion 68 which is provided at a position overlying the cavity forming the flavour release segment 58 and is approximately halfway along the length of the filter 54. An identical cut-out portion 68' (not shown) is provided on the opposed side of the filter 54. The activated carbon particles within the cavity in the flavour release segment are therefore visible through the cut-out portions 68, 68' and the underlying substantially transparent wrapper 64.

[0053] The filters of cigarettes 30 and 50 are produced in a conventional manner, using substantially transparent sheet materials to wrap filter segments or filters in place of a conventional paper material. The cut-out portions are formed in the sheet of tipping material prior to the application of the outer wrapper around the filters.

[0054] It will be appreciated that whilst the specific embodiments described above relate to conventional smoking articles comprising a filter and a tobacco rod, a similar arrangement of the substantially transparent wrapper and outer wrapper could also be used on a distillation-based smoking article or an electrically heated smoking article.

Claims

1. A smoking article comprising:

   an aerosol generating substrate;
   a mouthpiece in axial alignment with the aerosol generating substrate, the mouthpiece comprising one or more segments;
   a substantially transparent wrapper circumscribing the mouthpiece along at least a part of the length of the mouthpiece; and
   an outer wrapper circumscribing the mouthpiece, wherein the outer wrapper overlies the substantially transparent wrapper and comprises at least one cut-out portion extending around less than the full circumference of the smoking article and exposing an area of the substantially transparent wrapper, through which an underlying portion of the mouthpiece is visible.

2. A smoking article according to claim 1 wherein the aerosol generating substrate comprises a tobacco rod and wherein the mouthpiece comprises a filter having one or more filter segments.

3. A smoking article according to claim 1 or 2 wherein the outer wrapper is a tipping paper that joins the aerosol generating substrate and the mouthpiece.

4. A smoking article according to claim 1, 2 or 3 wherein the mouthpiece comprises a multi-segment filter including a filter segment comprising filtration material and a particulate material dispersed through the filtration material, wherein a portion of the said filter segment is visible through the at least one cut-out window in the outer wrapper.

5. A smoking article according to any preceding claim wherein the mouthpiece comprises a multi-segment filter including a hollow cavity at least partially filled with a particulate material, wherein a portion of the at least partially filled cavity is visible through the at least one cut-out window in the outer wrapper.

6. A smoking article according to claim 4 or 5 wherein the particulate material includes at least one sorbent selected from the group consisting of activated carbon, activated alumina, zeolites, molecular sieves and silica gel.

7. A smoking article according to claim 4, 5 or 6 wherein the particulate material includes at least one flavourant material.

8. A smoking article according to claim 7 wherein the particulate flavourant material comprises particles of plant material.

9. A smoking article according to any preceding claim wherein the at least one cut-out portion in the outer wrapper is provided at least 10 mm from the mouth end of the smoking article.

10. A smoking article according to any preceding claim wherein the smoking article comprises at least one circumferential row of perforations extending through the substantially transparent wrapper and the outer wrapper and located upstream of the cut-out portion in the outer wrapper.

11. A smoking article according to any preceding claim wherein the cut-out portion extends between 5 mm and 15 mm circumferentially around the mouthpiece.

12. A smoking article according to any preceding claim wherein the mouthpiece comprises a filter including at least one filter segment circumscribed by a substantially transparent plug wrap and wherein the substantially transparent plug wrap underlies the substantially transparent wrapper.

13. A method of producing a smoking article according to any preceding claim comprising:

providing a plurality of discrete, wrapped filters wrapped with a substantially transparent sheet material, the filters comprising one or more filter segments;
providing a plurality of rods of wrapped tobacco;
providing a sheet of outer wrapper having a succession of cut-out portions therein;
disposing one of the wrapped filters adjacent to and in axial alignment with one of the rods of wrapped tobacco; and
wrapping the sheet of outer wrapper around at least a portion of the wrapped filter and at least a portion of the adjacent rod of wrapped tobacco such that the sheet of outer wrapper attaches the wrapped filter to the tobacco rod and the cut-out portions overlie the substantially transparent sheet material.

14. A method according to claim 13 wherein the cut-out portions in the sheet of tipping material are formed using a die-cutting method.

15. Use of an outer wrapper on a smoking article comprising an aerosol generating substrate and a mouthpiece, wherein the outer wrapper comprises at least one cut-out portion extending around less than the full circumference of the mouthpiece.

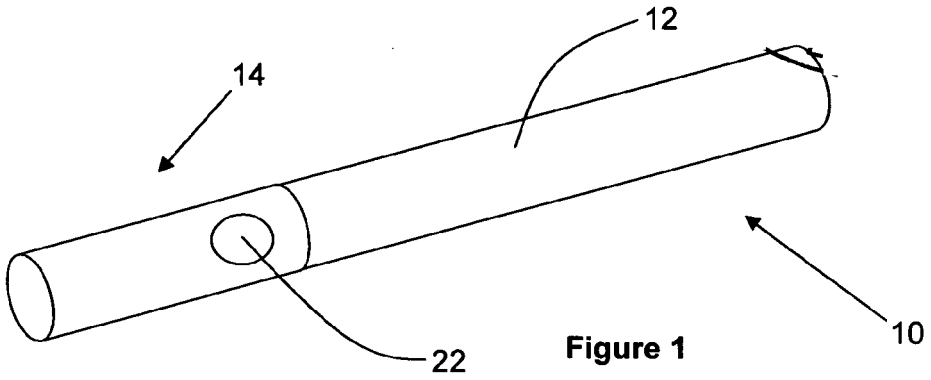

Figure 1

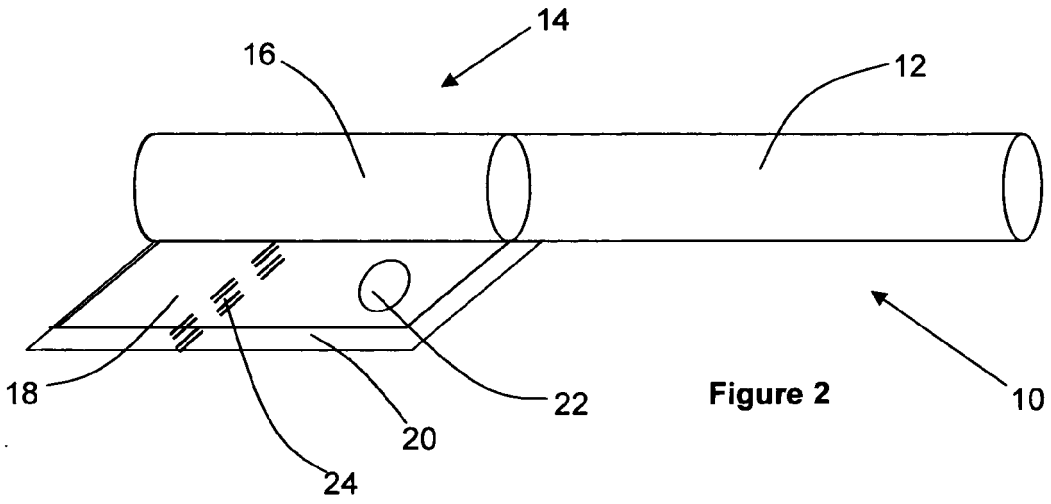

Figure 2

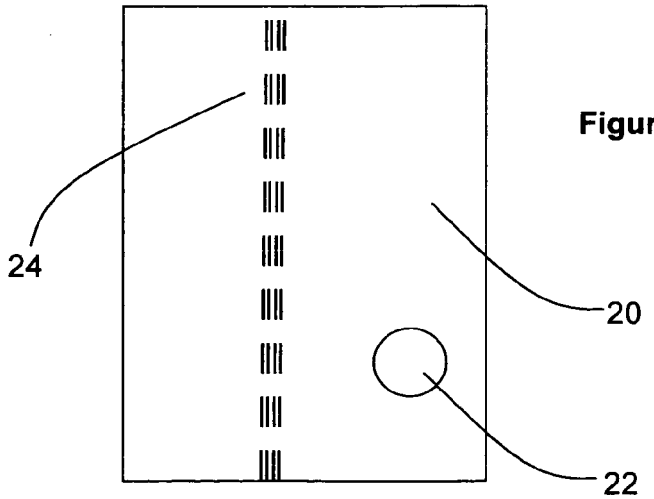

Figure 3

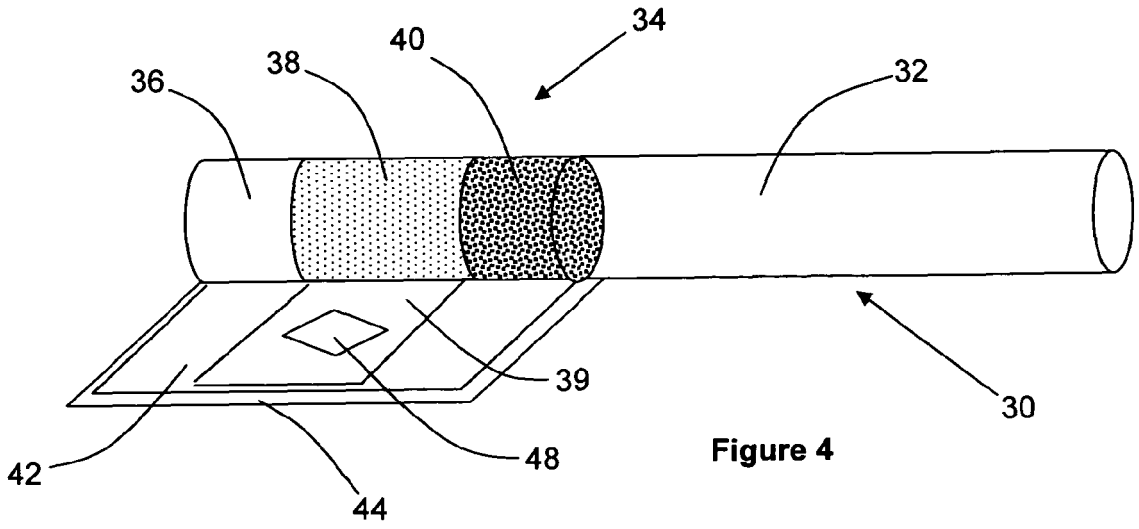

Figure 4

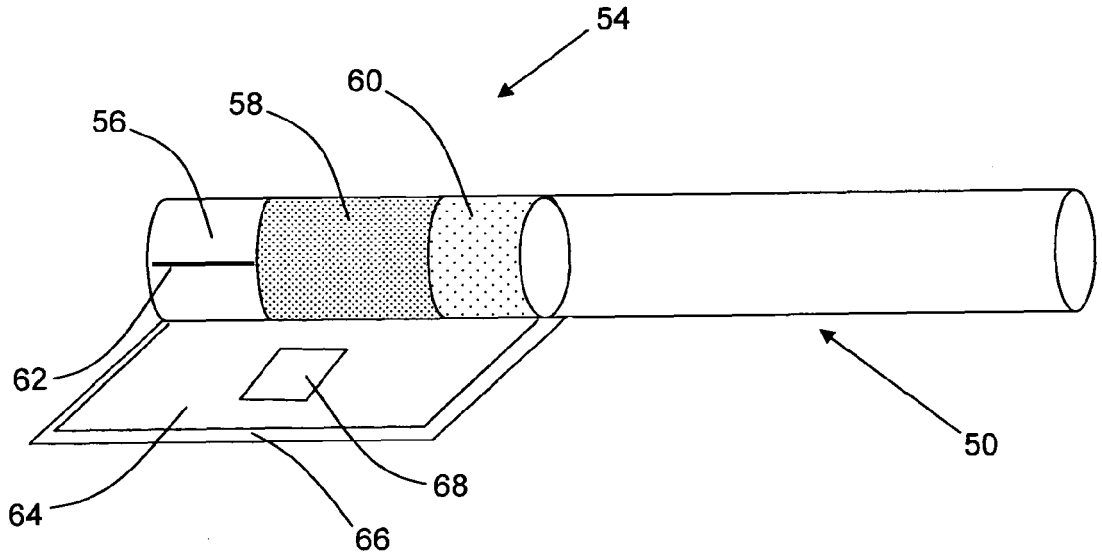

Figure 5

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European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 10 25 2093

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 1 252 832 A2 (HAUNI MASCHINENBAU AG [DE]) 30 October 2002 (2002-10-30) * paragraph [0002] * * paragraph [0019] - paragraph [0034]; figures * -----	1-15	INV. A24D1/02 A24D3/04
X	LU 52 346 A1 (LORILLARD P.) 11 January 1967 (1967-01-11) * the whole document * -----	1-3, 13-15	
X	CH 394 912 A (MUELLER PAUL ADOLF DIPL ING [LI]) 30 June 1965 (1965-06-30) * page 1, line 66 - page 2, line 101; figures * -----	1-3, 13-15	
A,D	WO 2009/106374 A1 (BRITISH AMERICAN TOBACCO CO [GB]; SUTTON JOSEPH PETER [GB]) 3 September 2009 (2009-09-03) * the whole document * -----	1-15	
A	WO 2009/147122 A2 (PHILIP MORRIS PROD [CH]; CECCHETTO ANDREA [CH]; CHAPUIS FREDERIC [CH];) 10 December 2009 (2009-12-10) * the whole document * -----	1-15	TECHNICAL FIELDS SEARCHED (IPC) A24D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	10 May 2011	Marzano Monterosso

CATEGORY OF CITED DOCUMENTS

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