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(54) **Smoking article having a mouth end cavity with indicia**

Rauchartikel mit einem Mundendhohlraum mit Markierung

Article à fumer doté d'une cavité d'extrémité buccale dotée de marques

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Description

[0001] The present invention relates to a smoking article including a wrapper forming a mouth end cavity and including one or more indicia applied to the inner surface of the mouth end cavity. The present invention also relates to a method for producing such a smoking article.

[0002] Various types of smoking articles are known, including some smoking articles in which smoking material is combusted and other non-combustion smoking articles in which no combustion occurs. As an example of a combustion smoking article, filter cigarettes typically comprise a cylindrical filter aligned in an end-to-end relationship with a wrapped tobacco rod, with the filter attached to the tobacco rod by tipping paper. In such filter cigarettes, the filter may consist of a plug of a fibrous filtration material, such as cellulose acetate tow, wrapped in porous plug wrap. Conventionally, the wrapped tobacco rod and the filter are joined by the tipping wrapper which is 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. WO-A-2011/117584 discloses a filter for a smoking article comprising a filter segment and a wrapper circumscribing the filter segment. The wrapper is substantially flush with a first end of the filter segment, whereas a second end of the wrapper extends beyond a second end of the filter segment to define a cavity at the second end of the filter segment.

[0003] As an example of a non-combustion smoking article, a number of smoking articles in which tobacco is heated rather than combusted have been disclosed. 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 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. As another example of a non-combustible smoking article, smoking articles in which a nicotine-containing aerosol is formed from a tobacco material or other nicotine source without combustion and without addition of heat have been disclosed, such as those described in WO-A-2008/121610 and WO-A-2010/107613. In these types of smoking articles, a chemical source is provided to generate the nicotine-containing aerosol.

[0004] It has previously been proposed to provide wrappers on smoking articles which have been printed with a graphic design in order to provide the smoking article with a more aesthetically appealing appearance. Such printing may be a continuous repeating pattern covering all or a portion of a tobacco rod wrapper or tipping paper, or may be discrete indicia or graphics. It would be desirable to provide a smoking article with novel ways of displaying indicia such as text, images, letters, words, logos, patterns or the like. It would be particularly desirable to provide a smoking article having such novel ways of displaying graphics or indicia without significantly affecting the overall dimensions of the smoking article. Furthermore, it would also be desirable if such a smoking article could be assembled using standard wrapping apparatus and techniques.

[0005] According to the invention there is provided a smoking article comprising a tobacco rod and a mouthpiece. The tobacco rod is formed from a tobacco material or another nicotine-containing substance adapted to be combusted to form smoke or heated to form an aerosol. The mouthpiece comprises at least one segment and a wrapper circumscribing the at least one segment and defining a mouth end cavity. The mouthpiece is in axial alignment with the tobacco rod and has a rod end adjacent the tobacco rod and a mouth end opposite the rod end. One or more indicia are applied to the inner surface of the wrapper portion defining the mouth end cavity.

[0006] The inclusion of the mouth end cavity increases the area for printing indicia without the requirement of significantly increasing the overall dimensions of the smoking article. By providing indicia on the inside surface of the mouth end cavity the consumer is provided with a strong visual impact and a distinctive product. Furthermore, the visible surface area on the smoking article may be increased with only a limited effect on the filtration efficiency of the smoking article.

[0007] The tobacco rod of the present invention is preferably formed from a tobacco material adapted to be combusted to form smoke, such as with a cigarette or other combustible smoking article. Alternatively, the tobacco rod may be any aerosol generating substrate that contains tobacco or another nicotine-containing substance. As such, mouthpieces according to the present invention may advantageously be used in filter cigarettes and other smoking articles in which tobacco material is combusted to form smoke. Mouthpieces according to the present invention may also be used in smoking articles in which tobacco material is heated to form an aerosol, rather than combusted. Mouthpieces according to the present invention may also used in smoking articles in which a nicotine-containing aerosol is generated from a tobacco material, tobacco extract, or other nicotine source, without combustion or heating.

[0008] The term "indicia" is used to refer to a discrete printed element, or repeating printed elements or patterns that provides an aesthetically pleasing representation. The indicia may be in the form of text, images, letters, words, logos, patterns or a combination thereof. For example, the indicia on the inner surface of the mouth end cavity according to the present invention may comprise a brand or manufacturer logo that allows the consumer to identify the type or origin of the smoking article. Alternatively, the indicia may comprise a repeating printed element or pattern on the inner surface of the wrapper

material. The indicia may be generally aligned with the axis of the smoking article, generally perpendicular with the axis of the smoking article, or at an angle other than parallel or perpendicular with the smoking article. In addition, different indicia could be provided on a number of smoking articles that are sold together. For example, in one package the smoking articles may include two or more different types of indicia. In addition, the indicia could be presented in a way that presents a message, for example with the indicia on adjacent smoking articles in a package visible when the packaging is opened and the visible indicia spelling a word or otherwise collectively conveying a message.

[0009] To form the mouth end cavity, the mouthpiece has a segment such as a filter segment or other structure, and the wrapper extends beyond the mouth end of the segment to form the mouth end cavity. The mouthpiece segment may have an internal structure, such as a hollow cylinder, or may be a cavity type filter as described in further detail below. The wrapper may extend beyond the mouth end of the segment by between about 2mm and about 10mm, preferably between about 4mm and about 7mm. The visible internal surface area of the wrapper may be between about 50 square millimetres and about 250 square millimetres, preferably between about 100 square millimetres and about 200 square millimetres, more preferably between about 100 square millimetres and about 175 square millimetres. The visible internal surface area of the wrapper may be at least about 5%, preferably at least about 10% of the total visible surface of the mouthpiece.

[0010] Where the wrapper material is a sheet material as discussed below, the basis weight of the wrapper material is preferably at least about 40 grams per square meter (gsm), more preferably at least about 60 gsm, most preferably at least about 80 gsm. In the alternative, or in addition, the wrapper material basis weight is preferably less than about 160 gsm, more preferably less than about 150 gsm, and most preferably less than about 140 gsm. The wrapper material basis weight is preferably between about 40 gsm and about 160 gsm, more preferably between about 45 gsm and about 150 gsm, most preferably between about 80 gsm and about 140 gsm. In general, it is advantageous to use stiffer wrapper material than for conventional smoking articles to reduce the possibility of the mouth end cavity collapsing upon smoking the smoking article.

[0011] In addition to providing indicia on the internal surface of the wrapper defining the mouth end cavity, such indicia may be provided on the external surface of the mouthpiece. When indicia are provided on the external surface of the mouthpiece they may be located only on the portion of the mouthpiece that defines the cavity, or they may extend along the mouthpiece towards the rod end of the mouthpiece. In some embodiments, the external indicia may be provided on an external surface of the wrapper, whereas in other embodiments the external indicia may be provided on the external surface of an additional wrapper material such as a tipping wrapper, which is further described below.

[0012] The cross-sectional shape of the smoking article may have a variety of shapes including round, oval, elliptical or egg-shaped.

[0013] 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. 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.

[0014] 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. The two or more segments may be joined by a coupling plug wrap that couples the two or more segments to one another in an end-to-end relationship. This coupling plug wrap may be a wrapper forming the mouth end cavity as described above, or there may be a subsequent wrapper that is disposed around the coupling plug wrap that forms the mouth end cavity.

[0015] 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 any particulate material to the filtration material.

[0016] Alternatively or in addition to the filter segments described herein, the multi-segment filter may include a hollow cavity at least partially filled with a particulate material. In such embodiments, the hollow cavity is preferably provided between two plugs of a filtration material.

[0017] Preferably, between about 40% and about 100% of the volume of the cavity is filled with particulate material, more preferably between about 60% and about 80% of the volume of the cavity. Such cavity filters 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 wrapper material with a space between them. The space between them is at least partially filled with the particulate material, and then the 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 various sources. For example, Filtrona International Ltd., Great Britain manufactures such machinery.

[0018] 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.

[0019] 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, flower, or combinations thereof, such as those typically used as spices.

[0020] 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).

[0021] In a first aspect of the present invention, the wrapper that includes the one or more indicia is a plug wrap. In this first aspect, the smoking article may further comprise a tipping paper, or tipping wrapper, circumscribing the mouthpiece and connecting the mouthpiece and the tobacco rod. The tipping paper may advantageously increase the stiffness of the mouth end cavity wall in order to reduce the possibility that the cavity will collapse upon smoking. Preferably, the tipping wrapper overlies all or part of the portion of the plug wrap defining the mouth end cavity. The tipping paper may be formed of a cellulosic paper sheet material, as in conventional cigarettes, and in this way the consumer is provided with a familiar texture and mouth feel.

[0022] In the first aspect, the plug wrap including the one or more indicia may extend part way along the length of the mouthpiece from the mouth end such that a portion of the mouthpiece at the rod end is not covered by the plug wrap. Preferably, there is provided a ventilation zone positioned at the portion of the mouthpiece that is not covered by the plug wrap. This may improve the ventilation through the smoking article. More preferably, the ventilation zone comprises at least one circumferential row of perforations, and the perforations extend through the tipping paper. This provides ventilation to the smoking article, so that mainstream smoke is mixed with ambient air during smoking. Where the mouthpiece comprises a filter, the circumferential rows of perforations are preferably provided at a location along the filter. Advantageously, where the plug wrap is substantially non-porous, not covering a portion of the mouthpiece with the plug wrap allows adequate ventilation through the ventilation zone.

[0023] In the first aspect, alternatively, the plug wrap including the one or more indicia may extend along the entire length of the mouthpiece, such that the entire mouthpiece, including the mouth end cavity, is covered by the plug wrap. In a yet further alternative, where the mouthpiece comprises at least one filter segment, the plug wrap is adapted to extend along the entire length of the filter segment or segments.

[0024] Where the mouthpiece comprises a filter, preferably, the perforations are provided between about 9 mm and about 20 mm from the mouth end of the filter. More preferably, the perforations are provided approximately about 12 mm from the mouth end of the filter. This may prevent the blocking or occlusion of the perforations by the consumer's lips during smoking.

[0025] In a further aspect of the present invention, the one or more indicia may be applied to the inner surface of a tipping paper that circumscribes the mouthpiece. In addition to the tipping paper, a substantially transparent wrapper in the form of a plug wrap may be provided that circumscribes the filter segment, or segments, as mentioned above. In this way, the one or more indicia on the tipping paper are visible through the substantially transparent plug wrap.

[0026] 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 indicia on the tipping paper are visible through the wrapper. The substantially transparent wrapper may be completely transparent. Alternatively, the substantially transparent wrapper may have a lower level of transparency whilst still transmitting sufficient light that the indicia are visible through the wrapper.

[0027] The thickness of the substantially transparent wrapper is preferably at least about 25 micrometers, more preferably at least about 35 micrometers, and most preferably about 40 micrometers. In addition, or in the alternative, the thickness is preferably less than about 110 micrometers, more preferably less than about 80 micrometers. The thickness is preferably between about 25 micrometers and about 110 micrometers, more preferably between about 35 micrometers and about 110 micrometers, most preferably between about 40 micrometers and about 80 micrometers. The basis weight of the substantially transparent wrapper is preferably at least about 40 grams per square meter (gsm), and more preferably between about 40 gsm and about 80 gsm, most preferably between about 40 gsm and about 60 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, cel-

lulose diacetate and polypropylene. Different grades, thicknesses and basis weights of suitable substantially transparent materials are commercially available from various sources. For example, Innovia Films Ltd. and Clarifoil make a variety of different types and grades of such materials.

[0028] Smoking articles according to the present invention may be a combustion smoking article such as a filter cigarette 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 non-combustible. As an example, the non-combustible smoking articles may include material that 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.

[0029] Alternatively, filters according to the invention may be incorporated into smoking articles in which a nicotine-containing aerosol is formed from a tobacco material or other nicotine source without combustion and without heating, such as those described in WO-A-2008/121610 and WO-A-2010/107613.

[0030] Where the smoking article is non-combustible, the wrapper may be a tube that forms the mouth end cavity of the smoking article. For example, the wrapper may be a plastic tube. In addition, any internal structures within the tube may be integral with the tube, or may be otherwise placed and secured within the tube.

[0031] The present invention further provides a method for the manufacture of a mouthpiece for a smoking article as described herein. The method comprises the steps of: providing a wrapper sheet material having one or more indicia applied thereto; providing a plurality of filter elements; disposing the filter elements on the wrapper sheet material so that the filter elements are spaced apart with one or more indicia between two adjacent filter elements; wrapping the wrapper sheet material around a portion of the filter elements such that the wrapper sheet material forms a mouth end cavity with the indicia disposed in the mouth end cavity. The mouthpiece produced by this process may then be cut along the mouth end cavity in order to create individual filters and expose the mouth end cavity.

[0032] In some embodiments, this method produces a mouthpiece which includes all of the elements of more than one mouthpiece or filter. This is often referred to as a multiple mouthpiece, or multiple filter. Where the multiple filter comprises all of the elements of two filters, it can be referred to as a double filter. Other multiple filters have also been produced, for example quadruple filters.

[0033] The mouthpiece or filter may be subsequently combined with wrapped rods of tobacco, or other types of smoking article aerosol generating substrate. For example, a tipping wrapper may be provided and wrapped around all or a portion of the mouthpiece and a portion of an adjacent tobacco rod in order to connect the mouthpiece and the tobacco rod to provide assembled smoking articles. Where the process utilizes multiple filters, the multiple filters may be subsequently cut through the mouth end cavity portion of the multiple filters to create two or more finished smoking articles and expose the mouth end cavity. The combination of the mouthpiece or filter and the wrapped rods of tobacco or other types of aerosol generating substrate may occur online, or offline on a machine that is separate from the machine used to produce the mouthpieces.

[0034] The indicia may be printed continuously on the wrapper, and in this embodiment no positioning of the filtration elements relative to the printed indicia is required. In an alternative embodiment, the indicia are printed discretely and are spaced apart such that the one or more indicia are located at said mouth end cavity. In this embodiment, the wrapper and the filtration elements must be aligned so that the indicia are visible in the mouth end cavity. Preferably, the position of the one or more indicia is registered using an optical device to enable the positioning of each indicium.

[0035] The indicia may be printed on the wrapper online, or offline. As used herein, the term online refers to carrying out the printing of the indicia as a step during the manufacture of the mouthpiece, or smoking article. The term offline refers to carrying out the printing of the indicia as a separate process. In the case of offline printing, the process may be conducted using separate machinery in the same manufacturing plant as the manufacture of the mouthpiece, or smoking article. Alternatively, the offline printing may be conducted using separate machinery in an alternate location to the manufacture of the mouthpiece or smoking article.

[0036] The invention will now be further described with reference to the following drawings in which:

Figure 1 shows a perspective view of a smoking article according to the invention with a mouth end cavity;
Figure 2 shows a schematic cross-section of a smoking article according to the invention; and
Figure 3 shows a wrapper according to the invention with discrete indicia applied to the inner surface.

[0037] Figure 1 shows a perspective view of a smoking article 100 comprising a filter segment 102, a tobacco rod 104, and a mouth end cavity 106. As can be seen, the mouth end cavity 106 has indicia, in the form of text in this particular example, on the inside. The text is oriented such that when the smoker is holding the smoking article in the conventional manner, the text is readable by the smoker. Likewise, where the indicia are graphics or the like, they are oriented in a similar manner. The smoking article has a diameter of approximately 7.85

mm, and a length of approximately 84 mm. The mouthpiece 101, which contains the mouth end cavity 106 and the filter segment 102, has a length of approximately 32 mm. The mouth end cavity has a depth of approximately 5 mm, and has a diameter of approximately 7.45 mm. Therefore, the inner surface area of the wrapper defining the cavity is approximately 117 mm^2, and the total surface area of the mouthpiece available for displaying indicia and the like is 874 mm^2, or the inner surface are of the wrapper defining the cavity is about 13% of the total visible surface area of the mouthpiece.

[0038] Figure 2 shows one embodiment of the smoking article according to the invention. The smoking article comprises a tobacco rod 104, or any other type of aerosol generating substrate containing tobacco material or nicotine-containing material, a mouthpiece 101, and tipping paper 202 utilised to join the tobacco rod 104 to the mouthpiece 101. The mouthpiece 101 comprises a mouth end cavity 106, which is defined by the wrapper 212, and the tipping paper 202. The mouthpiece also comprises two filter segments 204 and 206. Each filter segment is wrapped in respective plug wraps 208 and 210. Ventilation in the form of perforations 214 is provided in the mouthpiece 101 upstream of the mouth end cavity. In this embodiment the perforations 214 are provided adjacent the filter segment 204, and extend through the plug wrap 208, the wrapper 212 and the tipping paper 202. Alternatively, where the plug wrap 208 is porous the perforations may only extend through the wrapper 212 and the tipping paper 202. Further, where the wrapper 212 is porous perforations may only extend through the tipping paper 202.

[0039] The mouth end cavity provides an internal surface area for indicia to be displayed. The indicia or the like are printed on the internal surface of the wrapper 212.

[0040] The wrapper 212 has a basis weight of approximately 70 gsm to provide sufficient stiffness in order that that the mouth end cavity 106 does not collapse upon smoking the smoking article.

[0041] Figure 3 shows the internal surface of the wrapper 204 with discrete indicia 300 printed in a recurring pattern. During the continuous manufacture of the mouthpieces, a wrapper sheet material 212 with pre-printed indicia receives filter segments, wrapped in plug-wrap, to form a complete mouthpiece with a mouth end cavity. The filter segments are disposed on the wrapper sheet material so that each set of filter segments are spaced apart with the indicia disposed in the open space. Optical registration equipment may be utilised to ensure that the filter segments are aligned with the indicia. The manufacturing equipment is adapted to cut the mouthpieces into sets of two. Each set of two mouthpieces being joined at the mouth end. The length of the double mouthpiece is suitable for use in standard cigarette manufacturing equipment.

[0042] A tobacco rod is disposed in axial alignment with a mouthpiece at the end of the mouthpiece opposite to the mouth end cavity and attached to the mouthpiece with a tipping paper. The tipping paper and the wrapper sheet material is cut along line A-A such that a portion of the wrapper, including the one or more indicia, extends beyond the filter segments of each mouthpiece to define the mouth end cavity.

[0043] It will be appreciated that whilst the specific embodiments described above relate to smoking articles comprising a filter and a tobacco rod, a similar arrangement of the mouth end cavity could also be used on a non-combustible smoking article, as described above.

Claims

1. A smoking article (100) comprising:

   a tobacco rod (104); and
   a mouthpiece (101) comprising at least one segment (102; 204), and a wrapper (212; 208) circumscribing the at least one segment (102; 204) and defining a mouth end cavity (106), the mouthpiece (101) being in axial alignment with the tobacco rod (104) and having a rod end adjacent the tobacco rod (104) and a mouth end opposite the rod end;
   wherein the tobacco rod (104) is formed from a tobacco material or another nicotine-containing substance adapted to be combusted to form smoke or heated to form an aerosol; and
   wherein one or more indicia is disposed on the inner surface of the portion of the wrapper (212; 208) defining the mouth end cavity (106).

2. A smoking article according to claim 1 wherein the wrapper (212; 208) including the one or more indicia is a plug wrap.

3. A smoking article according to claim 2 wherein the smoking article (100) further comprises a tipping wrapper (202) circumscribing the mouthpiece (101) and connecting the mouthpiece (101) and the tobacco rod (104).

4. A smoking article according to claim 3 wherein the tipping wrapper (202) extends beyond the at least one segment (102; 204) of the mouthpiece (101) such that the tipping wrapper (202) overlies the portion of the plug wrap (212; 208) that defines the mouth end cavity (106).

5. A smoking article according to claim 2, 3 or 4 wherein the plug wrap (212; 208) including the one or more indicia extends part way along the length of the mouthpiece (101) from the mouth end such that a portion of the mouthpiece (101) at the rod end is not covered by the plug wrap (212; 208).

6. A smoking article according to claim 5 wherein the

smoking article (100) comprises a ventilation zone positioned at the portion of the mouthpiece (101) that is not covered by the plug wrap (212; 208).

7. A smoking article according to claim 1 wherein the wrapper including the one or more indicia is a tipping paper (202) circumscribing the mouthpiece (101) and connecting the mouthpiece (101) and the tobacco rod (104).

8. A smoking article according to claim 7, where the mouthpiece (101) is first wrapped with a substantially transparent plug wrap and the tipping paper (202) is wrapped around the substantially transparent plug wrap such that the indicia is visible through the substantially transparent plug wrap.

9. A smoking article according to any preceding claim wherein the at least one segment (102; 204) includes a filter comprising one or more filter segments.

10. A smoking article according to any preceding claim wherein additional indicia is provided on the external surface of the mouthpiece (101).

11. A smoking article according to any preceding claim wherein the indicia in the mouth end cavity (106) is a discrete indicia that is registered within the mouth end cavity (106).

12. A smoking article according to any of claims 1 to 10 wherein the indicia in the mouth end cavity (106) is a continuous pattern or image printed within the mouth end cavity (106).

13. A method for the manufacture of a mouthpiece for a smoking article comprising the steps of:

providing a wrapper sheet material having one or more indicia applied thereto;
providing a plurality of filter elements;
disposing the filter elements on the wrapper sheet material so that the filter elements are spaced apart with one or more indicia between adjacent filter elements;
wrapping the wrapper sheet material around a portion of the filter elements such that the wrapper sheet material forms a mouth end cavity with the indicia disposed in the mouth end cavity.

14. A method according to claim 13 wherein the position of the one or more indicia is registered using an optical device to enable the positioning of each mouthpiece adjacent an indicium.

15. A method according to claim 13 or 14, wherein said one or more indicia are applied to said wrapper sheet material online in a step preceding providing the wrapper sheet material having one or more indicia applied thereto.

Patentansprüche

1. Raucherartikel (100), umfassend:

einen Tabakeinsatz (104) und
ein Mundstück (101), das wenigstens ein Segment (102; 104) und eine das wenigstens eine Segment (102; 104) umschreibende und einen Mundendhohlraum (106) definierende Umhüllung (212; 208), aufweist, wobei das Mundstück (101) in axialer Ausrichtung mit dem Tabakeinsatz (104) ist und ein an den Tabakeinsatz (104) angrenzendes Einsatzende und ein dem Einsatzende entgegengesetztes Mundende hat,
wobei der Tabakeinsatz (104) aus einem Tabakmaterial oder einer anderen nikotinhaltigen Substanz gebildet ist, die für das Verbrennen zum Bilden von Rauch oder für das Erhitzen zum Bilden eines Aerosols ausgelegt ist, und
wobei an der Innenfläche des Teils der Umhüllung (212; 208), der den Mundendhohlraum (106) definiert, ein oder mehrere Zeichen angeordnet sind.

2. Raucherartikel nach Anspruch 1, wobei die Umhüllung (212; 208) mit dem einen oder den mehreren Zeichen ein Filterbelag ist.

3. Raucherartikel nach Anspruch 2, wobei der Raucherartikel (100) ferner einen Mundstückbelag (202) aufweist, der das Mundstück (101) umschreibt und das Mundstück (100) und den Tabakeinsatz (104) miteinander verbindet.

4. Raucherartikel nach Anspruch 3, wobei der Mundstückbelag (202) sich über das wenigstens eine Segment (102; 204) des Mundstücks (101) hinaus erstreckt, so dass der Mundstückbelag (202) den Teil des Filterbelags (212; 208) überlagert, der den Mundendhohlraum (106) definiert.

5. Raucherartikel nach Anspruch 2, 3 oder 4, wobei der Filterbelag (212; 208) mit dem einen oder den mehreren Zeichen sich vom Mundende ein Stück weit längs des Mundstücks (101) erstreckt, so dass ein Teil des Mundstücks (101) am Einsatzende nicht vom Filterbelag (212; 208) bedeckt wird.

6. Raucherartikel nach Anspruch 5, wobei der Raucherartikel (100) eine Belüftungszone aufweist, die an dem Teil des Mundstücks (101) positioniert ist, der von dem Einsatzbelag (212; 208) nicht bedeckt wird.

7. Raucherartikel nach Anspruch 1, wobei die Umhüllung mit dem einen oder den mehreren Zeichen ein Mundstückbelag (202) ist, der das Mundstück (101) umschreibt und und das Mundstück (101) und den Tabakeinsatz (104) miteinander verbindet.

8. Raucherartikel nach Anspruch 7, wobei das Mundstück (101) zuerst mit einem im Wesentlichen durchsichtigen Filterbelag umhüllt wird und der Mundstückbelag (202) um den im Wesentlichen durchsichtigen Filterbelag gehüllt wird, so dass die Zeichen durch den im Wesentlichen durchsichtigen Filterbelag hindurch sichtbar sind.

9. Raucherartikel nach einem der vorhergehenden Ansprüche, wobei das wenigstens eine Segment (102; 204) einen Filter beinhaltet, der ein oder mehrere Filtersegmente aufweist.

10. Raucherartikel nach einem der vorhergehenden Ansprüche, wobei an der Außenfläche des Mundstücks (101) zusätzliche Zeichen vorgesehen sind.

11. Raucherartikel nach einem der vorhergehenden Ansprüche, wobei die Zeichen in dem Mundendhohlraum (106) einzelne Zeichen sind, die im Mundendhohlraum (106) registerhaltig sind.

12. Raucherartikel nach einem der Ansprüche 1 bis 10, wobei die Zeichen im Mundendhohlraum (106) ein kontinuierliches Muster oder Bild sind, das im Mundendhohlraum (106) gedruckt ist.

13. Verfahren zur Herstellung eines Mundstücks für einen Raucherartikel, das die folgenden Schritte umfasst:

    Bereitstellen eines flächigen Umhüllungsmaterials mit einem oder mehreren daran angebrachten Zeichen,
    Bereitstellen von mehreren Filterelementen,
    Anordnen der Filterelemente auf dem flächigen Umhüllungsmaterial, so dass die Filterelemente mit einem oder mehreren Zeichen zwischen benachbarten Filterelementen voneinander beabstandet sind,
    Hüllen des flächigen Umhüllungsmaterials um einen Teil der Filterelemente, so dass das flächige Umhüllungsmaterial einen Mundendhohlraum bildet, wobei die Zeichen im Mundendhohlraum angeordnet sind.

14. Verfahren nach Anspruch 13, wobei die Position des/der einen oder mehreren Zeichen mithilfe eines optischen Geräts in Register gebracht wird, um die Positionierung jedes Mundstücks neben einem Zeichen zu ermöglichen.

15. Verfahren nach Anspruch 13 oder 14, wobei das/die genannte(n) eine oder mehreren Zeichen in einem Schritt, der dem Bereitstellen des flächigen Umhüllungsmaterials, an dem ein oder mehrere Zeichen angebracht sind, vorangeht, prozessgekoppelt auf dem genannten flächigen Umhüllungsmaterial angebracht werden.

Revendications

1. Article à fumer (100) comprenant :

    un bâtonnet de tabac (104) ; et
    un embout buccal (101) comprenant au moins un segment (102 ; 204), et une enveloppe (212 ; 208) entourant l'au moins un segment (102 ; 204) et définissant une cavité d'extrémité buccale (106), l'embout buccal (101) étant en alignement axial avec le bâtonnet de tabac (104) et ayant une extrémité bâtonnet adjacente au bâtonnet de tabac (104) et une extrémité buccale opposée à l'extrémité bâtonnet ;
    dans lequel le bâtonnet de tabac (104) est formé à partir d'une substance de tabac ou d'une autre substance à teneur en nicotine adaptée pour être brûlée afin de former une fumée ou être chauffée afin de pour former un aérosol ; et
    dans lequel une ou plusieurs marques sont disposées sur la surface interne de la partie de l'enveloppe (212 ; 208) définissant la cavité d'extrémité buccale (106).

2. Article à fumer selon la revendication 1, dans lequel la cape (212 ; 208) comportant les une ou plusieurs marques est une papier pour filtre.

3. Article à fumer selon la revendication 2, l'article à fumer (100) comprenant en outre un papier de manchette (202) entourant l'embout buccal (101) et reliant l'embout buccal (101) et le bâtonnet de tabac (104).

4. Article de manchette selon la revendication 3, dans lequel le papier de manchette (202) s'étend au-delà de l'au moins un segment (102 ; 204) de l'embout buccal (101) de telle sorte que le papier de manchette (202) recouvre la partie du papier pour filtre (212 ; 208) qui définit la cavité d'extrémité buccale (106).

5. Article à fumer selon la revendication 2, 3 ou 4, dans lequel le papier pour filtre (212 ; 208) comportant les une ou plusieurs marques s'étend en partie le long de l'embout buccal (101) depuis l'extrémité buccale de telle sorte qu'une partie de l'embout buccal (101) à l'extrémité bâtonnet ne soit pas couverte par le papier pour filtre (212 ; 208).

6. Article à fumer selon la revendication 5, l'article à fumer (100) comprenant une zone de ventilation positionnée au niveau d'une partie de l'embout buccal (101) qui n'est pas couverte par le papier pour filtre (212 ; 208).

7. Article à fumer selon la revendication 1, dans lequel l'enveloppe comportant les une ou plusieurs marques est un papier de manchette (202) entourant l'embout buccal (101) et reliant l'embout buccal (101) et le bâtonnet de tabac (104).

8. Article à fumer selon la revendication 7, dans lequel l'embout (101) est tout d'abord enveloppé avec un papier pour filtre sensiblement transparent et le papier de manchette (202) est enroulé autour du papier pour filtre sensiblement transparent de telle sorte que les marques soient visibles à travers le papier pour filtre sensiblement transparent.

9. Article à fumer selon l'une quelconque des revendications précédentes, dans lequel l'au moins un segment (102 ; 204) comporte un filtre comprenant un ou plusieurs segments de filtre.

10. Article à fumer l'une quelconque des revendications précédentes, dans lequel des marques supplémentaires sont fournies sur la surface externe de l'embout buccal (101).

11. Article à fumer l'une quelconque des revendications précédentes, dans lequel les marques dans la cavité d'extrémité buccale (106) sont un motif discret qui est aligné dans la cavité d'extrémité buccale (106).

12. Article à fumer l'une quelconque des revendications précédentes, dans lequel les marques dans la cavité d'extrémité buccale (106) sont un motif ou une image continu imprimé dans la cavité d'extrémité buccale (106).

13. Procédé de fabrication d'un embout buccal d'un article à fumer comprenant les étapes consistant à :

fournir un matériau de feuille d'enveloppement sur lequel sont appliquées une ou plusieurs marques ;
fournir une pluralité d'éléments de filtre ;
disposer les éléments de filtre sur le matériau de feuille d'enveloppement de telle sorte que les éléments de filtre soient espacés avec une ou plusieurs marques entre des éléments de filtre adjacents ;
envelopper le matériau de feuille d'enveloppement autour d'une partie des éléments de filtre de telle sorte que le matériau de feuille d'enveloppement forme une cavité d'extrémité buccale avec les marques disposées dans la cavité d'extrémité buccale.

14. Procédé selon la revendication 13, dans lequel la position des une ou plusieurs marques est alignée en utilisant un dispositif optique pour permettre le positionnement de chaque embout buccal près d'une marque.

15. Procédé selon la revendication 13 ou 14, dans lequel lesdites une ou plusieurs marques sont appliquées sur ledit matériau de feuille d'enveloppement en ligne dans une étape précédant la fourniture du matériau de feuille d'enveloppement sur lequel sont appliquées une ou plusieurs marques.

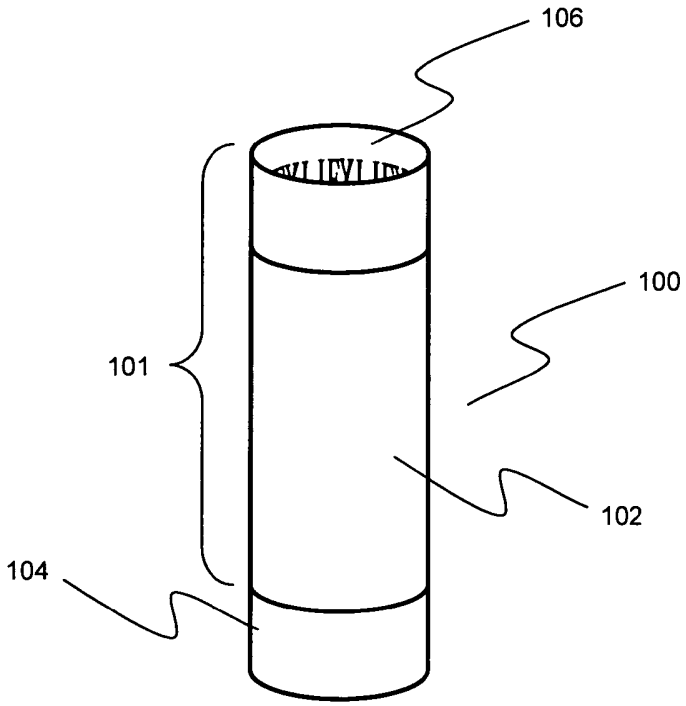


Figure 1

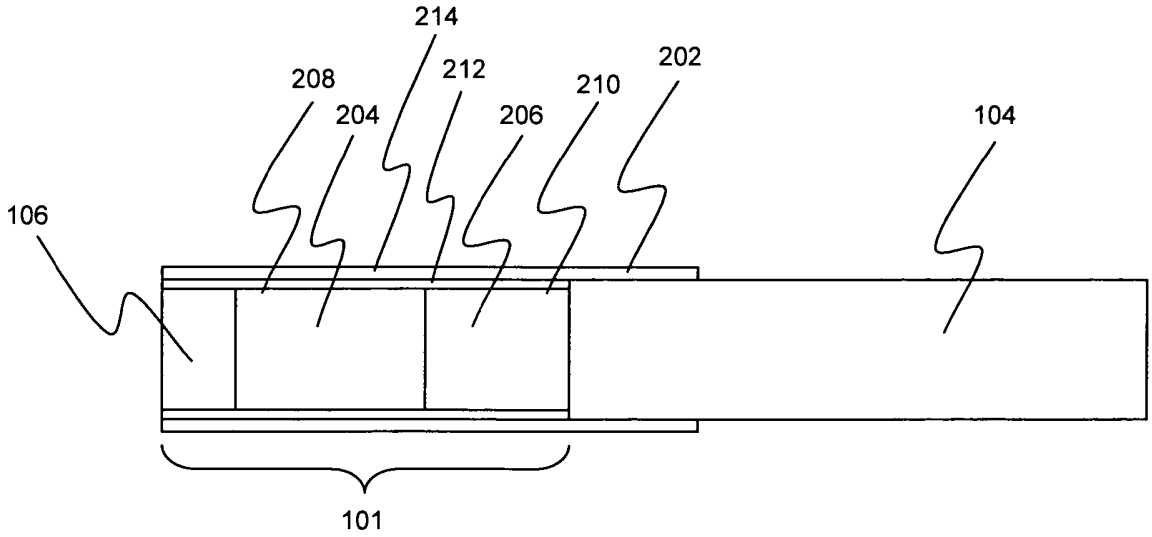
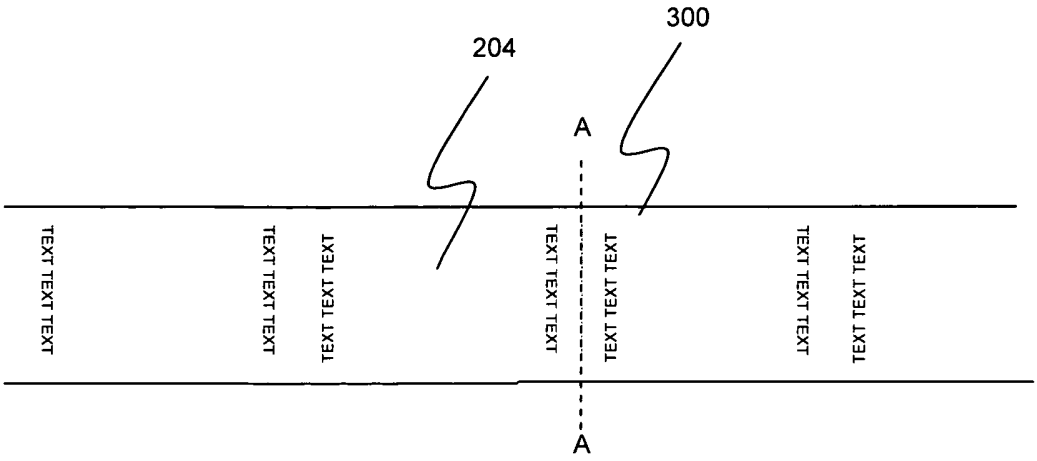


Figure 2


204
300
A
TEXT TEXT TEXT
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TEXT TEXT TEXT
TEXT TEXT TEXT
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TEXT TEXT TEXT
TEXT TEXT TEXT
A

Figure 3

REFERENCES CITED IN THE DESCRIPTION

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713555/DO

SZABADALMI IGÉNYPONTOK

1. Dohányzási cikk (100), amely magában foglal:

egy dohányrudat (104); és

egy szájrészt (101), amely szájrész magában foglal legalább egy szakaszt (102; 204) és egy burkolást (212; 208), ami körülveszi a legalább egy szakaszt (102; 204), és egy szájvégi üreget (106) határol, továbbá amely szájrész (101) axiálisan egy irányba van állítva a dohányrúddal (104), és van egy dohányrúdi vége, amely a dohányrúddal (104) szomszédos, és egy szájvége, amely a dohányrúdi véggel átellenes;

amelynél a dohányrúd (104) dohányanyagból vagy nikotint tartalmazó más anyagból van kialakítva, ami alkalmassá van téve arra, hogy elégetve füstöt képezzen, vagy melegítve aeroszolt képezzen; és

amelynél a burkolás (212; 208) szájvégi üreget (106) határoló részének belső felületén egy vagy több megjelölés van elhelyezve.

2. Az 1. igénypont szerinti dohányzási cikk, amelynél az egy vagy több megjelölést magán viselő burkolás (212; 208) dugóburkolat.

3. A 2. igénypont szerinti dohányzási cikk, amelynél a dohányzási árucikk (100) magában foglal továbbá egy szájrészrögzítő burkolást (202), ami körülveszi a szájrészt (101), és összekapcsolja a szájrészt (101) és a dohányrudat (104).

4. A 3. igénypont szerinti dohányzási cikk, amelynél a szájrészrögzítő burkolás (202) a szájrésznek (101) a legalább egy szakaszán (102; 204) túlnyúlik, úgyhogy a szájrészrögzítő burkolás (202) átlapolja a dugóburkolat (212; 208) azon részét, amely a szájvégi üreget (106) határolja.

5. A 2., 3. vagy 4. igénypont szerinti dohányzási cikk, amelynél az egy vagy több megjelölést magán viselő dugóburkolat (212; 208) a szájvégtől a szájrész (101)

hosszának csak egy részén megy végig, úgyhogy a dohányrúdi végnél a szájrész (101) egy részét nem fedi le a dugóburkolat (212; 208).

6. Az 5. igénypont szerinti dohányzási cikk, amelynél a dohányzási árucikk (100) magában foglal egy szellőzőzónát a szájrész (101) azon részén elhelyezve, amelyet a dugóburkolat (212; 208) nem fed le.

7. Az 1. igénypont szerinti dohányzási cikk, amelynél az egy vagy több megjelölést magán viselő burkolás szájrészrögzítő papír (202), ami körülveszi a szájrészt (101), és összekapcsolja a szájrészt (101) és a dohányrudat (104).

8. A 7. igénypont szerinti dohányzási cikk, amelynél a szájrész (101) először egy lényegében átlátható dugóburkolattal van betekerve, és a szájrészrögzítő papír (202) a lényegében átlátható dugóburkolat köré van tekerve, úgyhogy a megjelölés a lényegében átlátható dugóburkolaton keresztül látható.

9. Az előző igénypontok bármelyike szerinti dohányzási cikk, amelynél a legalább egy szakasz (102; 204) része egy filter, amely egy vagy több filterszakaszt foglal magába.

10. Az előző igénypontok bármelyike szerinti dohányzási cikk, amelynél a szájrész (101) külső felületén további megjelölés van elhelyezve.

11. Az előző igénypontok bármelyike szerinti dohányzási cikk, amelynél a szájvégi üregben (106) lévő megjelölés különálló megjelölés, amely a szájvégi üregben (106) vonalba van állítva.

12. Az 1–10. igénypont bármelyike szerinti dohányzási cikk, amelynél a szájvégi üregben (106) lévő megjelölés folytonos minta vagy kép, ami a szájvégi üregben (106) van nyomtatva.

13. Eljárás dohányzási cikkhez való szájrész gyártására, amely eljárás magában foglalja a következő lépéseket:

előkészítünk egy vagy több felhordott megjelöléssel rendelkező burkoló lapanyagot;

előkészítünk több filterelemet;

a filterelemeket elhelyezzük a burkoló lapanyagon olyan módon, hogy a filterelemek között osztásközt hagyunk akképp, hogy a szomszédos filterelemek között egy vagy több megjelölés legyen;

a burkoló lapanyagot a filterelemek egy része köré tekerjük olyan módon, hogy a burkoló lapanyag egy szájvégi üreget képezzen akképp, hogy a megjelölés a szájvégi üregben helyezkedjen el.

14. A 13. igénypont szerinti eljárás, amelynél az egy vagy több megjelölés pozícióját optikai készüléket alkalmazva állítjuk vonalba, hogy lehetővé tegyük minden egyes szájrésznek egy megjelölés mellé pozicionálását.

15. A 13. vagy 14. igénypont szerinti eljárás, amelynél az egy vagy több megjelölést gyártósorba integrálva hordjuk fel a burkoló lapanyagra egy lépésben, amely megelőzi az egy vagy több felhordott megjelöléssel rendelkező burkoló lapanyag előkészítésének lépését.

A meghatalmazott:

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