



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
12.08.2020 Bulletin 2020/33

(51) Int Cl.:
A24D 3/18 (2006.01) A24F 47/00 (2020.01)

(21) Application number: **19155934.3**

(22) Date of filing: **07.02.2019**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(71) Applicant: **NERUDIA LIMITED**
Liverpool L24 9HP (GB)

(72) Inventor: **The designation of the inventor has not
yet been filed**

(74) Representative: **Mewburn Ellis LLP**
Aurora Building
Counterslip
Bristol BS1 6BX (GB)

(54) **SMOKING SUBSTITUTE APPARATUS**

(57) A sticker (200) for use with a smoking substitute apparatus, the sticker comprising:
an adhesive portion (202) for adhering the sticker to a mouthpiece of the substitute apparatus; and
a flavoured portion (208), the flavoured portion being arranged to cover an outlet of the mouthpiece when the sticker is adhered to the mouthpiece;
wherein the flavoured portion is permeable to an aerosol generated by the smoking substitute apparatus.

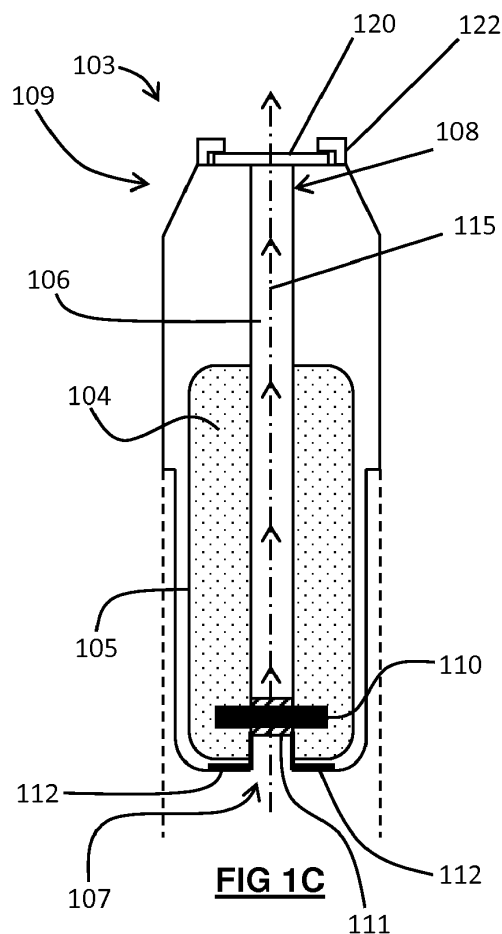


FIG 1C

Description

Field of the Invention

[0001] The present invention relates to a flavour delivery article in the form of a flavoured sticker for use with a smoking substitute apparatus, to deliver flavour to a user of the smoking substitute apparatus.

Background

[0002] The smoking of tobacco is generally considered to expose a smoker to potentially harmful substances. It is generally thought that a significant amount of the potentially harmful substances are generated through the heat caused by the burning and/or combustion of the tobacco and the constituents of the burnt tobacco in the tobacco smoke itself.

[0003] Combustion of organic material such as tobacco is known to produce tar and other potentially harmful byproducts. There have been proposed various smoking substitute apparatuses in order to avoid the smoking of tobacco.

[0004] Such smoking substitute apparatuses can form part of nicotine replacement therapies aimed at people who wish to stop smoking and overcome a dependence on nicotine.

[0005] Smoking substitute apparatuses include electronic systems that permit a user to simulate the act of smoking by producing an aerosol (also referred to as a "vapour") that is drawn into the lungs through the mouth (inhaled) and then exhaled. The inhaled aerosol typically bears nicotine and/or a flavourant without, or with fewer of, the odour and health risks associated with traditional smoking.

[0006] In general, smoking substitute apparatuses are intended to provide a substitute for the rituals of smoking, whilst providing the user with a similar experience and satisfaction to those experienced with traditional smoking and with combustible tobacco products.

[0007] The popularity and use of smoking substitute apparatuses has grown rapidly in the past few years. Although originally marketed as an aid to assist habitual smokers wishing to quit tobacco smoking, consumers are increasingly viewing smoking substitute apparatuses as desirable lifestyle accessories. There are a number of different categories of smoking substitute apparatuses, each utilising a different smoking substitute approach.

[0008] One approach is the so-called "vaping" approach, in which a vaporisable liquid, typically referred to (and referred to herein) as "e-liquid", is heated by a heating device (referred to herein as an electronic cigarette or "e-cigarette" device) to produce an aerosol vapour which is inhaled by a user. The e-liquid typically includes a base liquid as well as nicotine and/or a flavourant. The resulting vapour therefore also typically contains nicotine and/or a flavourant. The base liquid may include propylene glycol and/or vegetable glycerine.

[0009] A typical e-cigarette device includes a mouthpiece, a power source (typically a battery), a tank for containing e-liquid, as well as a heating device. In use, electrical energy is supplied from the power source to the heating device, which heats the e-liquid to produce an aerosol (or "vapour") which is inhaled by a user through the mouthpiece.

[0010] E-cigarettes can be configured in a variety of ways. For example, there are "closed system" vaping smoking substitute apparatuses, which typically have a sealed tank and heating element. The tank is pre-filled with e-liquid and is not intended to be refilled by an end user. One subset of closed system vaping smoking substitute apparatuses include a main body which includes the power source, wherein the main body is configured to be physically and electrically coupled to a consumable including the tank and the heating element. In this way, when the tank of a consumable (or "cartridge") has been emptied, that consumable is disposed of. The main body can be reused by connecting it to a new, replacement, consumable. Another subset of closed system vaping smoking substitute systems are completely disposable, and intended for one-use only.

[0011] There are also "open system" vaping smoking substitute apparatuses which typically have a tank that is configured to be refilled by a user. In this way the device can be used multiple times.

[0012] An example vaping smoking substitute apparatus is the myblu™ e-cigarette. The myblu™ e-cigarette is a closed system which includes a main body and a consumable (cartridge). The main body and consumable are physically and electrically coupled together by pushing the consumable into the main body. The main body includes a rechargeable battery. The consumable includes a mouthpiece, a sealed tank which contains e-liquid, as well as a heater, which for this device is a heating filament coiled around a portion of a wick. The wick is partially immersed in the e-liquid, and conveys e-liquid from the tank to the heating filament. The device is activated when a microprocessor on board the main body detects a user inhaling through the mouthpiece. When the device is activated, electrical energy is supplied from the power source to the heating device, which heats e-liquid from the tank to produce a vapour which is inhaled by a user through the mouthpiece.

[0013] An alternative to the "vaping" approach is the so-called Heated Tobacco ("HT") approach in which tobacco (rather than an e-liquid) is heated or warmed to release vapour. HT is also known as "heat not burn" ("HNB"). The tobacco may be leaf tobacco or reconstituted tobacco. In the HT approach the intention is that the tobacco is heated but not burned, i.e. the tobacco does not undergo combustion.

[0014] The heating, as opposed to burning, of the tobacco material is believed to cause fewer, or smaller quantities, of the more harmful compounds ordinarily produced during smoking. Consequently, the HT approach may reduce the odour and/or health risks that can arise

through the burning, combustion and pyrolytic degradation of tobacco.

[0015] A typical HT smoking substitute system may include a device and a consumable. The consumable may include the tobacco material. The device and consumable may be configured to be physically coupled together. In use, heat may be imparted to the tobacco material by a heating element of the device, wherein airflow through the tobacco material causes components in the tobacco material to be released as vapour. A vapour may also be formed from a carrier in the tobacco material (this carrier may for example include propylene glycol and/or vegetable glycerine) and additionally volatile compounds released from the tobacco. The released vapour may be entrained in the airflow drawn through the tobacco.

[0016] As the vapour passes through the consumable (entrained in the airflow) from the location of vapourisation to an outlet of the consumable (e.g. a mouthpiece), the vapour cools and condenses to form an aerosol for inhalation by the user. The aerosol may contain nicotine and/or flavour compounds.

[0017] For a smoking substitute device it is desirable to deliver nicotine into the user's lungs, where it can be absorbed into the bloodstream. As explained above, in the so-called "vaping" approach, e-liquid is heated by a heating device to produce an aerosol vapour which is inhaled by a user. Many e-cigarettes also deliver flavour to the user to enhance the experience. In such e-cigarettes, flavour compounds are contained in the e-liquid that is heated. However, toxicology restrictions are placed on the amount of flavour that can be contained in the e-liquid, and this can result in some e-liquid flavours delivering a weak and underwhelming taste sensation to consumers in the pursuit of safety. Further, there is a view that providing a flavourant as part of the e-liquid, such that the flavourant is vaporised with the e-liquid, may be disadvantageous.

[0018] There may be a need for improved design of smoking substitute apparatuses, in particular in regards to the delivery of flavour to a user.

[0019] The present disclosure has been devised in the light of the above considerations.

Summary of the Invention

[0020] At its most general, the present invention relates to a flavoured sticker for use with a smoking substitute apparatus. The flavoured sticker may be applied to a mouthpiece of the smoking substitute apparatus to deliver flavour (e.g. a taste and/or scent) to a user of the smoking substitute apparatus.

[0021] In this manner, flavour may be delivered to a user through the sticker, rather than through a flavourant contained in an aerosol-former (e.g. e-liquid or tobacco material) of the of the smoking substitute apparatus. As a result, there may be no need to include any flavourants in the aerosol-former of the smoking substitute apparatus.

[0022] The sticker may be applied to the mouthpiece when the user wishes to experience flavour. The sticker may then be removed if the user no longer wants to receive flavour, or if they want to change the sticker. Stickers having different flavours may be provided, so that the user may apply a sticker with a desired flavour to the mouthpiece, without having to otherwise modify the smoking substitute apparatus. This may improve a versatility of the smoking substitute apparatus, as the user may experience a wide range of flavours simply by changing the sticker on the mouthpiece.

[0023] According to a first aspect there is provided a sticker for use with a smoking substitute apparatus, the sticker comprising: an adhesive portion for adhering the sticker to a mouthpiece of the substitute apparatus; and a flavoured portion, the flavoured portion being arranged to cover an outlet of the mouthpiece when the sticker is adhered to the mouthpiece; wherein the flavoured portion is permeable to an aerosol generated by the smoking substitute apparatus.

[0024] Thus, a user may adhere the sticker to the mouthpiece of a smoking substitute apparatus so that the flavoured portion of the sticker covers the outlet of the mouthpiece. In this manner, an aerosol generated by a smoking substitute device and delivered to the user via the mouthpiece may pass through the flavoured portion of the sticker and pick up flavour from the sticker. As a result, flavour may be delivered to the user, together with the aerosol. Additionally, due to the sticker's location on the mouthpiece, it may come into contact with the user's tongue so as to directly deliver flavour to the user's tongue. The smoking substitute device may be a vaping type device or a heated tobacco device.

[0025] The adhesive portion of the sticker may include an adhesive for adhering (sticking) the sticker to a surface of the mouthpiece. The adhesive may be configured to stick the sticker to mouthpiece when the adhesive portion is pressed against a surface of the mouthpiece. Preferably, the adhesive may be of a type that facilitates removal, so that the sticker may be easily removed from the mouthpiece after use. In some embodiments, the adhesive portion of the sticker may be disposed on a first side of the sticker, and the flavoured portion may be disposed on a second, opposite side of the sticker. This may avoid bringing the adhesive portion into contact with the user's tongue.

[0026] The sticker may include a backing arranged to cover the adhesive portion before use. Then, to affix the sticker to the mouthpiece, the backing may be removed to expose the adhesive portion so that it can be applied to the mouthpiece.

[0027] The flavoured portion is arranged to cover the outlet of the mouthpiece of the smoking substitute apparatus. For example, the flavoured portion may have a shape that substantially matches a shape of the outlet of the mouthpiece, so that the flavoured portion may be aligned with the outlet to cover the outlet. Alternatively, the flavoured portion may be larger than the outlet, to

facilitate placing it over the outlet. The shape and size of the sticker, and the layout of the adhesive and flavoured portions may be adapted to the layout of the smoking substitute apparatus with which the sticker is intended to be used.

[0028] The flavoured portion may include a flavourant for producing a flavour (e.g. taste and/or scent). The flavourant may be arranged to be entrained into the user's mouth by a flow of aerosol through the outlet of the mouthpiece when the sticker is adhered to the mouthpiece. Additionally or alternatively, the flavourant may be arranged to produce a smell and/or taste that is perceived by the user when the user puts the mouthpiece having the sticker adhered thereto in their mouth. In this manner, flavour may be effectively delivered to the user.

[0029] The term "flavourant" is used to describe a compound or combination of compounds that provide flavour and/or aroma. For example, the flavourant may be configured to interact with a sensory receptor of a user (such as an olfactory or taste receptor). The flavourant may include one or more volatile substances.

[0030] The flavourant may be provided in solid or liquid form. The flavourant may be natural or synthetic. For example, the flavourant may include menthol, liquorice, chocolate, fruit flavour (including e.g. citrus, cherry etc.), vanilla, spice (e.g. ginger, cinnamon) and tobacco flavour. The flavourant may be evenly dispersed or may be provided in isolated locations and/or varying concentrations in the flavoured portion of the sticker.

[0031] The flavoured portion is permeable to an aerosol generated by the smoking substitute apparatus. This may mean that the flavoured portion is capable of transmitting an aerosol generated by the smoking substitute apparatus. In this manner, aerosol generated by the smoking substitute apparatus may be delivered to the user through the flavoured portion of the sticker.

[0032] The flavoured portion may be heat-activated. For example, the flavoured portion may be arranged to release flavourant in response to heat being applied to the flavoured portion. For example, when the sticker is adhered to the mouthpiece of a smoking substitute apparatus, the mouthpiece may be inserted into a user's mouth. The user's mouth (e.g. lips and/or tongue) may heat the flavoured portion of the sticker, which may cause the flavoured portion to release flavourant to the user. In this manner, the sticker may only produce a flavour when in use. Prior to activation of the flavoured portion (e.g. before being heated by a user's mouth), the sticker may be substantially odourless. As an example, the flavoured portion may include flavourant that is contained within microcapsules (e.g. made of gelatin, or the like), the microcapsules being arranged to rupture upon application of heat (e.g. from the user's mouth). In this manner when heat is applied to the flavoured portion, the microcapsules may rupture, causing release of flavourant.

[0033] The flavoured portion may be friction-activated. For example, the flavoured portion may be arranged to release flavourant in response to friction being applied

to the flavoured portion. For example, to activate the flavoured portion, a user may rub the sticker to cause release of flavour. In this manner, prior to use of the sticker, no flavour may be emitted by the flavoured portion, such that the sticker is substantially odourless. As an example, the flavoured portion may include flavourant that is contained within microcapsules (e.g. made of gelatin, or the like), the microcapsules being arranged to rupture upon application of friction (e.g. from rubbing or scratching the sticker). In this manner when friction is applied to the flavoured portion, the microcapsules may rupture, causing release of flavourant.

[0034] The flavoured portion may be activated by the aerosol generated by the smoking substitute apparatus passing through the flavoured portion. For example, the flavoured portion may be arranged to release flavourant in response to an aerosol passing through the flavoured portion. In this manner, the flavoured portion may only deliver flavour when a user inhales an aerosol from the smoking substitute apparatus through the flavoured portion of the sticker.

[0035] As an example, the flavoured portion may include a barrier layer which encapsulates the flavourant. The barrier layer may be configured to rupture or disintegrate in the presence of aerosol, so that the flavourant is released. Similarly, the flavourant may be contained in microcapsules that are configured to rupture and release the flavourant when aerosol comes into contact with the microcapsules.

[0036] For example, the microcapsules may include a membrane made of a hydrogel composite containing Chitosan. Chitosan is substantially stable around pH 7.5. Thus, when a microcapsule enters the user's mouth, the Chitosan, and hence the microcapsule's membrane, may be stable and retain its integrity for a period of time. When the user inhales an aerosol having a more alkaline pH (e.g. an aerosol produced from an e-liquid having a pH around 7.8), the change in pH in the user's mouth may cause the Chitosan, and hence microcapsule's membrane, to rapidly break down and release the flavourant contained within.

[0037] The flavourant in the flavoured portion may be a freeze-dried flavourant. In this manner, the flavourant may be activated by moisture in the user's mouth. Thus, the flavourant may not produce a flavour until it reaches the user's mouth.

[0038] The flavoured portion may include a removable protective outer layer. The removable protective outer layer may serve to protect the flavoured portion (e.g. from contamination) before use. The removable protective outer layer may then be removed to expose the flavoured portion for use. The removable protective outer layer may, for example, be a layer of material that covers the flavoured portion and that can be removed from the flavoured portion by peeling it off. In another example, the removable protective outer layer may be removed by rubbing and/or scratching the removable protective outer layer.

[0039] The flavoured portion may include one or more apertures for transmitting the aerosol generated by the smoking substitute apparatus. The one or more apertures may be dimensioned to enable transmission of the aerosol, to render the flavoured portion permeable to the aerosol. The one or more apertures may be an array of apertures that are distributed over an area of the flavoured portion. In this manner, aerosol may be transmitted substantially uniformly by the flavoured portion.

[0040] The flavoured portion may include a porous material for transmitting the aerosol generated by the smoking substitute apparatus. This may render the flavoured portion permeable to the aerosol. The porous material may, for example, be a mesh material, a cloth material, a fibre material, a filter material, or a paper material. Using a porous material for the flavoured portion may enhance transmission of aerosol by the flavoured portion, which may facilitate inhalation of the aerosol by the user.

[0041] The porous material may contain a flavourant. In this manner, when the aerosol passes through the porous material, it may entrain the flavourant contained therein to deliver flavour to the user. As an example, the porous material may be imbued with a liquid flavourant. As another example, the flavourant may be a powder which is contained within the porous material.

[0042] The adhesive portion may include a ring of adhesive arranged to surround the outlet of the mouthpiece when the sticker is adhered to the mouthpiece. Thus, when the sticker is adhered to the mouthpiece, the ring of adhesive may form a seal around the outlet of the mouthpiece, so that aerosol exiting the mouthpiece must pass through the flavoured portion of the sticker. In other words, the ring of adhesive may prevent aerosol from escaping from the mouthpiece without passing through the flavoured portion of the sticker. This may improve the quality of flavour delivery to the user. The ring of adhesive may be circular, or have any other suitable shape for surrounding the outlet of the mouthpiece.

[0043] The flavoured portion may include a flavourant disposed on a surface of the sticker. In this manner, the flavourant may come in direct contact with the user's mouth (e.g. tongue) when the sticker is adhered to the mouthpiece and the mouthpiece is inserted into the user's mouth.

[0044] The flavoured portion may include a flavourant that is embedded in a material forming the flavoured portion. This may enable the flavourant to be entrained by an aerosol passing through the flavoured portion. The flavourant may be embedded in the material forming the flavoured portion during manufacture of the flavoured portion.

[0045] According to a second aspect of the invention, there is provided a smoking substitute apparatus comprising: a mouthpiece with an outlet for delivering an aerosol generated by the smoking substitute apparatus to a user; and a sticker according to the first aspect of the invention, the sticker being adhered to the mouthpiece such that the flavoured portion covers the outlet. In this

manner, when the user inhales an aerosol through the mouthpiece of the smoking substitute apparatus, flavour from the sticker adhered to the mouthpiece may be delivered to the user.

[0046] The sticker may be disposed on an outside of the mouthpiece. Alternatively, the sticker may be disposed on an inside of the mouthpiece. In this case, it may be necessary to remove the mouthpiece from the smoking substitute apparatus in order to adhere the sticker to the inside of the mouthpiece. Accordingly, the mouthpiece may be removably mountable on the smoking substitute apparatus.

[0047] The mouthpiece of the smoking substitute apparatus may include a surface disposed around the outlet of the mouthpiece and arranged to receive the adhesive portion of the sticker. This may facilitate adhering the sticker to the mouthpiece, and ensure that the sticker is placed at a correct location on the mouthpiece. The surface may be substantially flat, to facilitate adhering of the sticker. The mouthpiece may further include a slot or indentation around the surface, to facilitate alignment of the sticker over the outlet.

[0048] The mouthpiece may include a tab arranged to hold the sticker in place over the mouthpiece. This may prevent the sticker from becoming unstuck and/or shifting position on the mouthpiece during use. The tab may, for example, be a flexible member which is arranged to press a surface of the sticker against the mouthpiece when the sticker is adhered to the mouthpiece.

[0049] The smoking substitute apparatus may be in the form of a consumable. The consumable may be configured for engagement with a main body (i.e. so as to form a closed smoking substitute system). For example, the consumable may comprise components of the system that are disposable, and the main body may comprise non-disposable or non-consumable components (e.g. power supply, controller, sensor, etc.) that facilitate the delivery of aerosol by the consumable. In such an embodiment, the aerosol former (e.g. e-liquid) may be replenished by replacing a used consumable with an unused consumable.

[0050] Alternatively, the smoking substitute apparatus may be a non-consumable apparatus (e.g. that is in the form of an open smoking substitute system). In such embodiments an aerosol former (e.g. e-liquid) of the system may be replenished by re-filling e.g. a reservoir of the smoking substitute apparatus with the aerosol former (rather than replacing a consumable component of the apparatus).

[0051] In light of this, it should be appreciated that some of the features described herein as being part of the smoking substitute apparatus may alternatively form part of a main body for engagement with the smoking substitute apparatus (i.e. when the smoking substitute apparatus is in the form of a consumable).

[0052] Where the smoking substitute apparatus is in the form of a consumable, the main body and the consumable may be configured to be physically coupled to-

gether. For example, the consumable may be at least partially received in a recess of the main body, such that there is an interference fit between the main body and the consumable. Alternatively, the main body and the consumable may be physically coupled together by screwing one onto the other, or through a bayonet fitting.

[0053] Thus, the smoking substitute apparatus may comprise one or more engagement portions for engaging with a main body. In this way, one end of the smoking substitute apparatus may be coupled with the main body, whilst an opposing end of the smoking substitute apparatus may define a mouthpiece of the smoking substitute system.

[0054] The smoking substitute apparatus may comprise a reservoir configured to store an aerosol former, such as an e-liquid. The e-liquid may, for example, comprise a base liquid and e.g. nicotine. The base liquid may include propylene glycol and/or vegetable glycerine. The e-liquid may be flavourless. That is, the e-liquid may not contain any flavourants and may consist solely of a base liquid of propylene glycol and/or vegetable glycerine and nicotine.

[0055] The reservoir may be in the form of a tank. At least a portion of the tank may be translucent. For example, the tank may comprise a window to allow a user to visually assess the quantity of e-liquid in the tank. A housing of the smoking substitute apparatus may comprise a corresponding aperture (or slot) or window that may be aligned with a translucent portion (e.g. window) of the tank. The reservoir may be referred to as a "clearomizer" if it includes a window, or a "cartomizer" if it does not.

[0056] The smoking substitute apparatus may comprise a passage for fluid flow therethrough. The passage may extend through (at least a portion of) the smoking substitute apparatus, between openings that may define an inlet and an outlet of the passage. The outlet may be at a mouthpiece of the smoking substitute apparatus. In this respect, a user may draw fluid (e.g. air) into and through the passage by inhaling at the outlet (i.e. using the mouthpiece). The passage may be at least partially defined by the tank. The tank may substantially (or fully) define the passage. In this respect, the tank may surround the passage.

[0057] The smoking substitute apparatus may comprise an aerosol-generator. The aerosol generator may comprise a wick. The aerosol generator may further comprise a heater. The wick may comprise a porous material. A portion of the wick may be exposed to fluid flow in the passage. The wick may also comprise one or more portions in contact with liquid stored in the reservoir. For example, opposing ends of the wick may protrude into the reservoir and a central portion (between the ends) may extend across the passage so as to be exposed to fluid flow in the passage. Thus, fluid may be drawn (e.g. by capillary action) along the wick, from the reservoir to the exposed portion of the wick.

[0058] The heater may comprise a heating element, which may be in the form of a filament wound about the

wick (e.g. the filament may extend helically about the wick). The filament may be wound about the exposed portion of the wick. The heating element may be electrically connected (or connectable) to a power source.

Thus, in operation, the power source may supply electricity to (i.e. apply a voltage across) the heating element so as to heat the heating element. This may cause liquid stored in the wick (i.e. drawn from the tank) to be heated so as to form a vapour and become entrained in fluid flowing through the passage. This vapour may subsequently cool to form an aerosol in the passage.

[0059] The smoking substitute apparatus (or main body engaged with the smoking substitute apparatus) may comprise a power source. The power source may be electrically connected (or connectable) to a heater of the smoking substitute apparatus (e.g. when engaged with the main body). The power source may be a battery (e.g. a rechargeable battery). A connector in the form of e.g. a USB port may be provided for recharging this battery.

[0060] When the smoking substitute apparatus is in the form of a consumable, the smoking substitute apparatus may comprise an electrical interface for interfacing with a corresponding electrical interface of the main body.

One or both of the electrical interfaces may include one or more electrical contacts. Thus, when the main body is engaged with the consumable, the electrical interface may be configured to transfer electrical power from the power source to a heater of the consumable.

[0061] The electrical interface may also be used to identify the smoking substitute apparatus (in the form of a consumable) from a list of known types. For example, the consumable may have a certain concentration of nicotine and the electrical interface may be used to identify this. The electrical interface may additionally or alternatively be used to identify when a consumable is connected to the main body.

[0062] Again, where the smoking substitute apparatus is in the form of a consumable, the main body may comprise an interface, which may, for example, be in the form of an RFID reader, a barcode or QR code reader. This interface may be able to identify a characteristic (e.g. a type) of a consumable engaged with the main body. In this respect, the consumable may include any one or more of an RFID chip, a barcode or QR code, or memory within which is an identifier and which can be interrogated via the interface.

[0063] The smoking substitute apparatus or main body may comprise a controller, which may include a micro-processor. The controller may be configured to control the supply of power from the power source to the heater of the smoking substitute apparatus (e.g. via the electrical contacts). A memory may be provided and may be operatively connected to the controller. The memory may include non-volatile memory. The memory may include instructions which, when implemented, cause the controller to perform certain tasks or steps of a method.

[0064] The main body or smoking substitute apparatus

may comprise a wireless interface, which may be configured to communicate wirelessly with another device, for example a mobile device, e.g. via Bluetooth®. To this end, the wireless interface could include a Bluetooth® antenna. Other wireless communication interfaces, e.g. WiFi®, are also possible. The wireless interface may also be configured to communicate wirelessly with a remote server.

[0065] A puff sensor may be provided that is configured to detect a puff (i.e. inhalation from a user). The puff sensor may be operatively connected to the controller so as to be able to provide a signal to the controller that is indicative of a puff state (i.e. puffing or not puffing). The puff sensor may, for example, be in the form of a pressure sensor or an acoustic sensor. That is, the controller may control power supply to the heater of the consumable in response to a puff detection by the sensor. The control may be in the form of activation of the heater in response to a detected puff. That is, the smoking substitute apparatus may be configured to be activated when a puff is detected by the puff sensor. When the smoking substitute apparatus is in the form of a consumable, the puff sensor may form part of the consumable or the main body.

[0066] According to a third aspect of the invention, there is provided a smoking substitute kit including: a smoking substitute apparatus, the smoking substitute apparatus having a mouthpiece with an outlet for delivering an aerosol generated by the smoking substitute apparatus to a user; and a sticker according to the first aspect of the invention, wherein the flavoured portion of the sticker is arranged to cover an outlet of the mouthpiece when the sticker is adhered to the mouthpiece.

[0067] In a similar manner to that discussed above, a user may stick the sticker to the mouthpiece so that the flavoured portion of the sticker covers the outlet. In this manner, flavour may be delivered to the user when they use the smoking substitute apparatus.

[0068] The kit may include multiple stickers according to the first aspect of the invention. Each sticker may have the same or different flavours. In this manner, the user may select a sticker to obtain a desired flavour.

[0069] The smoking substitute apparatus of the smoking substitute kit may be similar to the smoking substitute apparatus described above in relation to the second aspect of the invention.

[0070] According to a fourth aspect of the invention, there is provided a method of delivering flavour to a user of a smoking substitute apparatus, the smoking substitute apparatus having a mouthpiece with an outlet for conveying an aerosol generated by the smoking substitute system to the user, wherein the method includes: adhering a sticker according to the first aspect of the invention to the mouthpiece so that the flavoured portion of the sticker covers the outlet; generating, in the smoking substitute apparatus, an aerosol; and conveying the generated aerosol to the user via the outlet in the mouthpiece, so that the aerosol passes through the flavoured portion of the sticker. In this manner, flavour may be delivered

to the user by the sticker on the mouthpiece.

[0071] The method of the fourth aspect of the invention may, for example, be performed using the smoking substitute kit of the third aspect of the invention. Features of previous aspects of the invention may therefore be shared with the fourth aspect of the invention.

[0072] Where the flavoured portion of the sticker is heat-activated, the method may further include the step of applying heat to the flavoured portion to activate the flavoured portion to deliver flavour to the user. For example, the flavoured portion may be heated by the user pressing their lip or tongue against the sticker.

[0073] Where the flavoured portion of the sticker is friction-activated, the method may further include the step of applying friction to the flavoured portion to activate the flavoured portion to deliver flavour to the user. For example, the flavoured portion may be rubbed or scratched by the user to cause it to release flavour.

[0074] Where the flavoured portion of the sticker is activated by the aerosol generated by the smoking substitute apparatus passing through the flavoured portion, the method may further include the step of activating, with the aerosol, the flavoured portion of the sticker.

[0075] Where the flavoured portion includes a removable protective outer layer, the method may include the step of removing the removable protective outer layer.

[0076] Where the adhesive portion includes a ring of adhesive arranged to surround the outlet of the mouthpiece when the sticker is adhered to the mouthpiece, the method may further include adhering the ring of adhesive around the outlet to form a seal around the outlet.

[0077] The invention includes the combination of the aspects and preferred features described except where such a combination is clearly impermissible or expressly avoided.

Summary of the Figures

[0078] So that the invention may be understood, and so that further aspects and features thereof may be appreciated, embodiments illustrating the principles of the invention will now be discussed in further detail with reference to the accompanying figures, in which:

Figure 1A is a front view of a smoking substitute system according to an embodiment of the invention, in an engaged position;

Figure 1B is a front view of the smoking substitute system of Figure 1A in a disengaged position;

Figure 1C is a section view of a consumable of the smoking substitute system of Figure 1A, according to an embodiment of the invention;

Figure 1D is a front view of the consumable of Figure 1C;

Figure 2A is a cross-sectional side view of a sticker according to an embodiment of the invention;

Figure 2B is a top view of the sticker of Figure 2A; and

Figure 3 is a schematic cross-sectional view a flavourant-containing microcapsule that may be included in a sticker that is an embodiment of the invention.

Detailed Description of the Invention

[0079] Aspects and embodiments of the present invention will now be discussed with reference to the accompanying figures. Further aspects and embodiments will be apparent to those skilled in the art. All documents mentioned in this text are incorporated herein by reference.

[0080] Figures 1A and 1B illustrate a smoking substitute system in the form of an e-cigarette system 101. The system 101 comprises an e-cigarette device defining a main body 102 of the system 101, and an smoking substitute apparatus in the form of an e-cigarette consumable (or "pod") 103. In the illustrated embodiment the consumable 103 (smoking substitute apparatus) is removable from the main body (e-cigarette device), so as to be a replaceable component of the system 101. In other words, the e-cigarette system 101 is a closed system. An expanded schematic cross-sectional view of the consumable 103 is shown in Fig. 1C; a front view of the consumable 103 is shown in Fig. 1D.

[0081] As is apparent from Figures 1A and 1B, the consumable 103 is configured to engage the main body 102. Figure 1A shows the main body 102 and the consumable 103 in an engaged state, whilst Figure 1B shows the main body 102 and the consumable 103 in a disengaged state. When engaged, a portion of the consumable 103 is received in a cavity of the main body 102 and is retained in the engaged position by way of a snap-engagement mechanism. In other embodiments, the main body 102 and consumable 103 may be engaged by screwing one into (or onto) the other, through a bayonet fitting, or by way of an interference fit.

[0082] The system 101 is configured to vaporise an aerosol-former, which in the illustrated embodiment, is in the form of a nicotine-based e-liquid 104. The e-liquid 104 comprises nicotine and a base liquid including propylene glycol and/or vegetable glycerine. In the present embodiment, the e-liquid 104 is flavourless (and does not include any added flavourant). That is, if the e-liquid 104 were to be inhaled (i.e. in aerosol form) by a user, it would not have a particularly perceptible flavour or taste.

[0083] As is more apparent from Figure 1C, this e-liquid 104 is stored within a reservoir in the form of a tank 105 that forms part of the consumable 103. In the illustrated embodiment, the consumable 103 is a "single-use" consumable 103. That is, upon exhausting the e-liquid 104 in the tank 105, the intention is that the user disposes of

the entire consumable 103. In other embodiments, the e-liquid (i.e. aerosol former) may be the only part of the system that is truly "single-use". That is, the tank may be refillable with e-liquid or the e-liquid may be stored in a non-consumable component of the system. For example, the e-liquid may be stored in a tank located in the main body or stored in another component that is itself not single-use (e.g. a refillable cartomizer).

[0084] The tank 105 surrounds, and thus defines a portion of, a passage 106 that extends between an inlet 107 and an outlet 108 at opposing ends of the consumable 103. In this respect, the passage comprises an upstream end at the end of the consumable 103 that engages with the main body 102, and a downstream end at an opposing end of the consumable 103 that comprises a mouthpiece 109 of the system 101. When the consumable 103 is engaged with the main body 102, a user can inhale (i.e. take a puff) via the mouthpiece 109 so as to draw air through the passage 106, and so as to form an airflow (indicated by arrows) in a direction from the inlet 107 to the outlet 108 of the passage 106. Although not illustrated, the passage 106 may be partially defined by a tube (e.g. a metal tube) extending through the consumable 103. The passage 106 is in fluid communication with a gap defined between the consumable 103 and the main body 102 (when engaged) such that air outside of the system 101 is drawn into the passage 106 (during an inhale).

[0085] The smoking substitute system 101 is configured to vaporise the e-liquid 104 for inhalation by a user. To provide this, the consumable 103 comprises a heater having of a porous wick 110 and a resistive heating element in the form of a heating filament 111 that is helically wound around a portion of the porous wick 110. The porous wick 110 extends across the passage 106 (i.e. transverse to a longitudinal axis of the passage 106) and opposing ends of the wick 110 extend into the tank 105 (so as to be submerged in the e-liquid 104). In this way, e-liquid 104 contained in the tank 105 is conveyed from the opposing ends of the porous wick 110 to a central portion of the porous wick 110 so as to be exposed to the airflow in the passage 106 (i.e. caused by a user inhaling).

[0086] The helical filament 111 is wound about this exposed central portion of the porous wick 110 and is electrically connected to an electrical interface in the form of electrical contacts 112 mounted at the end of the consumable that is proximate the main body 102 (when engaged). When the consumable 103 is engaged with the main body 102, the electrical contacts 112 contact corresponding electrical contacts (not shown) of the main body 102. The main body electrical contacts are electrically connected to a power source (not shown) of the main body 102, such that (in the engaged position) the filament 111 is electrically connected to the power source. In this way, power can be supplied by the main body 102 to the filament 111 in order to heat the filament 111. This heat is transferred from the filament 111 to the porous wick 110 which causes e-liquid 104 conveyed by

the porous wick 110 to increase in temperature to a point at which it vaporises. The vaporised e-liquid becomes entrained in the airflow and, between the vaporisation point at the filament 111 and the outlet 108 of the passage 106, condenses to form an aerosol. This aerosol is then inhaled, via the mouthpiece 109, by a user of the system 101.

[0087] The power source of the main body 102 may be in the form of a battery (e.g. a rechargeable battery). The main body 102 may comprise a connector in the form of e.g. a USB port for recharging this battery. The main body 102 may also comprise a controller that controls the supply of power from the power source to the main body electrical contacts (and thus to the filament 111). That, is the controller may be configured to control a voltage applied across the main body electrical contacts, and thus the voltage applied across the filament 111. In this way, the filament 111 may only be heated under certain conditions (e.g. during a puff and/or only when the system is in an active state). In this respect, the main body 102 may include a puff sensor (not shown) that is configured to detect a puff (i.e. inhalation). The puff sensor may be operatively connected to the controller so as to be able to provide a signal, to the controller, which is indicative of a puff state (i.e. puffing or not puffing). The puff sensor may, for example, be in the form of a pressure sensor or an acoustic sensor.

[0088] Although not shown, the main body 102 and consumable 103 may comprise a further interface which may, for example, be in the form of an RFID reader, a barcode or QR code reader. This interface may be able to identify a characteristic (e.g. a type) of a consumable 103 engaged with the main body 102. In this respect, the consumable 103 may include any one or more of an RFID chip, a barcode or QR code, or memory within which is an identifier and which can be interrogated via the interface.

[0089] The controller may further comprise a communication interface for communicating with an external device. For example, the controller may include a wireless interface for wireless communication (e.g. Bluetooth, Wi-Fi) or a wired interface for wired communication (e.g. USB).

[0090] A sticker 120 is affixed to the mouthpiece 109 of the consumable 103, such that the sticker 120 covers the outlet 108 of the mouthpiece 109 (see Fig. 1C). The sticker 120 includes an adhesive portion which serves to adhere the sticker 120 to the mouthpiece 109, and a flavoured portion which is arranged to cover the outlet 108 of the mouthpiece 109. The sticker is described in more detail below in relation to Figs. 2A and 2B. The flavoured portion of the sticker 120 is permeable to the aerosol generated in the apparatus 101, such that the aerosol may pass through the flavoured portion of the sticker 120 when a user inhales the aerosol through the mouthpiece 109.

[0091] The flavoured portion of the sticker 120 includes a flavourant which may be entrained by the aerosol when

the aerosol passes through the flavoured portion of the sticker 120, to provide flavour to the user. The flavourant may also produce a taste on the user's tongue when the user puts the mouthpiece 109 in their mouth. In this manner, flavour may be delivered to the user without having to include any flavourant in the e-liquid.

[0092] The mouthpiece 109 includes a pair of flexible tabs 122 disposed adjacent to the outlet 108 and arranged to hold the sticker 120 in place on the mouthpiece 109. The flexible tabs 122 are arranged to press the sticker 120 against an outer surface of the mouthpiece 109, to prevent the sticker from moving or becoming unstuck during use. Together the flexible tabs 122 define a groove in which the sticker 120 is received. This may serve to ensure correct placement of the sticker 120, to ensure that it completely covers the outlet 108 of the mouthpiece 109. The sticker 120 may be affixed to the mouthpiece 109 by bending one or both of the flexible tabs 122 to enable the sticker 120 to be positioned over the outlet 108. For illustration purposes, the flexible tabs are not depicted in Figs. 1A and 1B.

[0093] Fig. 1D illustrates a front view of the consumable 103, i.e. a view of the consumable looking towards the outlet 108 along an axis defined by arrows 115 in Fig. 1C.

[0094] The consumable 103 and the sticker 120 may be provided separately (e.g. as parts of a kit for a smoking substitute apparatus). Then, before using the consumable 103, the user may affix the sticker 120 to the mouthpiece 109, so that they receive flavour when inhaling an aerosol through the mouthpiece 109. When the sticker 120 is used up (e.g. when it no longer has any flavourant), the user may remove the sticker 120 and replace it with a new sticker 120. The sticker 120 may be configured to last for a certain amount of time, e.g. for a predetermined number of puffs, or for a predetermined amount of time in the user's mouth.

[0095] Different stickers may be provided, each having a different flavour. In this manner, a user may select a desired flavour by affixing a sticker having the desired flavour to the mouthpiece 109.

[0096] Fig. 2A shows a cross-sectional side view of a sticker 200 that is an embodiment of the invention, the sticker being intended for use with a smoking substitute apparatus (e.g. apparatus 101). Fig. 2B shows a top view of sticker 200. For example, sticker 200 may correspond to sticker 120 described above.

[0097] The sticker 200 has a generally circular shape and includes an adhesive portion 202 for adhering the sticker to a mouthpiece of a smoking substitute apparatus (e.g. mouthpiece 109). The adhesive portion 202 is formed by a ring of adhesive material which is disposed on a first surface of a substrate 204 of the sticker 200. Fig. 2B shows the first surface of the substrate 204 with the ring of adhesive forming the adhesive portion 202. The ring of adhesive material is arranged to encircle an outlet of the mouthpiece (e.g. outlet 108) when the sticker 200 is adhered to the mouthpiece 109. A central portion

206 of the substrate may thus cover the outlet of the mouthpiece when the sticker 200 is adhered to the mouthpiece. In this manner, when the sticker is adhered to the mouthpiece, the adhesive portion 202 may form a seal around the outlet, so that aerosol exiting the outlet is forced through the central portion 206 of the substrate 204.

[0098] The adhesive material forming the adhesive portion 202 may be any suitable pressure-activated adhesive. In this manner, when the sticker 200 is pressed against an outer surface of the mouthpiece, the adhesive material causes the sticker 200 to adhere to the mouthpiece. A backing layer (not shown) may be provided to protect the adhesive portion 202 prior to use. Then, when a user wishes to apply the sticker to a mouthpiece, the user may remove the backing layer to expose the adhesive portion 202, so that the sticker may be adhered to the mouthpiece. The backing layer may, for example be made of paper, vinyl, or some other suitable material.

[0099] The substrate 204 may be made of a material that is permeable to an aerosol generated by the smoking substitute system, so that the aerosol may pass through the central portion 206 of the substrate 204 when the sticker 200 is adhered to a mouthpiece of the smoking substitute system. Preferably, the substrate 204 may be made of a porous material, to facilitate transmission of the aerosol. The porous material may, for example, be a mesh material, a cloth material, a fibre material, a filter material, or a paper material. In some cases, only the central portion 206 of the substrate 204 may be made of a porous material, and the remainder of the substrate 204 may be made of a non-porous material. In some embodiments, one or more apertures (not shown) may be formed in the central portion 206 of the substrate 204, to further facilitate transmission of the aerosol through the substrate 204.

[0100] In the example shown, the sticker 200 further includes a flavourant layer 208 disposed on a second surface of the substrate 204. The second surface of the substrate 204 is on an opposite side of the substrate 204 compared to the first surface of the substrate 204 on which the adhesive ring forming the adhesive portion 202 is disposed. Thus, when the sticker 200 is adhered to a mouthpiece, the flavourant layer 208 may face towards a user, so that it may come in direct contact with a user's mouth (e.g. tongue), when the user puts the mouthpiece in their mouth.

[0101] The flavourant of the flavourant layer 208 may be arranged to produce a taste sensation when the user's tongue comes into contact with the flavourant layer. Additionally or alternatively, the flavourant may be arranged to be entrained by a flow of aerosol from the mouthpiece into the user's mouth, to deliver flavour to the user. For example, the flavourant may include a volatile liquid and/or flavourant particles which may be entrained by a flow of aerosol through the central portion 206 of the substrate 204.

[0102] The flavourant may be provided in solid or liquid

form. The flavourant may be natural or synthetic. For example, the flavourant may include menthol, liquorice, chocolate, fruit flavour (including e.g. citrus, cherry etc.), vanilla, spice (e.g. ginger, cinnamon) and tobacco flavour. The flavourant may be evenly dispersed or may be provided in isolated locations and/or varying concentrations in the flavoured portion of the sticker.

[0103] In some embodiments, various mechanisms may be used to "activate" delivery of the flavourant to the user. This may ensure that flavourant is retained in the flavourant layer 208 and is not released before use. For example, the flavourant layer 208 may be heat- and/or friction-activated. In such a case, the flavourant may be contained in an array of microcapsules arranged to form the flavourant layer 208. The microcapsules may then be arranged to rupture to release flavourant upon heating (e.g. when the sticker comes into contact with the user's mouth) and/or when friction is applied to the flavourant layer 208 (e.g. by rubbing or scratching the flavourant layer 208). In some cases, the flavourant layer 208 may be activated by the aerosol itself. For example, a chemical in the aerosol may cause the microcapsules to rupture and release flavourant when aerosol passes through the central portion 206 of the substrate 204. Such a scenario is discussed below in relation to Fig. 3.

[0104] Additionally or alternatively, the sticker 200 may include a removable protective outer layer arranged to cover and protect the flavourant layer 208 prior to use. The removable protective outer layer may for example be a sticker arranged to cover the flavourant layer 208 which can be removed (e.g. peeled off) to expose the flavourant layer. The removable protective layer may be made of any suitable material, e.g. paper or vinyl.

[0105] In an alternative embodiment, flavourant may be directly incorporated into the substrate 204, instead of providing a separate flavourant layer 208. For example, the substrate 204 may be made of a porous material that is imbued with a flavourant liquid.

[0106] Fig. 3 shows a schematic cross-sectional view of a microcapsule 302 containing a flavourant 304. The microcapsule 302 is arranged to disintegrate in the presence of an aerosol generated by a smoking substitute system (e.g. system 101), to release the flavourant 304 contained therein. A plurality of such microcapsules 302 containing flavourant may be disposed in the flavourant layer 208 of the sticker 200.

[0107] The microcapsule 302 includes an outer membrane 306 made of a hydrogel composite which contains Chitosan. Chitosan is substantially stable around pH 7.5. Thus, when the microcapsule 302 is placed in a user's mouth, the Chitosan, and hence the outer membrane 306, may be stable and retain its integrity for a period of time. In this manner, the flavourant 304 contained in the microcapsule 302 is not released and so does not produce a flavour in the user's mouth.

[0108] A nicotine-containing e-liquid may produce an aerosol which has a pH around 7.8. Thus, when a user inhales such an aerosol produced with such an e-liquid,

a pH in the user's mouth may increase above pH 7.5, which may cause rapid breakdown of the Chitosan in the outer membrane 306, resulting in disintegration of the microcapsule's outer membrane 306 and release of the flavourant 304.

[0109] The flavourant 304 in the microcapsule 302 may be in solid or liquid form. Preferably, the flavourant 304 may be a freeze-dried flavourant. In other words, during manufacture the flavourant 304 may have been freeze-dried to remove moisture from the flavourant 304. This may reduce the risk of flavourant 304 escaping from the microcapsule 302 prior to use. When the flavourant 304 is released from the microcapsule 302 due to disintegration of the outer membrane 306 in the user's mouth, the flavourant 304 may be activated by moisture in the user's mouth (e.g. the flavourant 304 may dissolve in the user's saliva), to produce a flavour in the user's mouth.

[0110] The outer membrane 306 may include Chitosan having a Deacetylation (DDT) of 75% - 99%. The hydrogel composite forming the outer membrane may, for example, include 0.1% w/w up to 20% w/w of Chitosan. The hydrogel composite may further include excipients such as Xanthan Gum, water, propylene glycol and/or vegetable glycerine.

[0111] Any of the following compounds may also break down upon contacting the aerosol, and so may be included in the hydrogel composite (instead of, or in addition to, Chitosan): Hyaluronic Acid, Dextran, Poly-Acrylamide, Polyacrylic Acid, Guar Gum Succinate, Kappa-Carrageenan, Poly(vinyl Alcohol).

[0112] The microcapsule 302 may be manufactured by first freeze-drying a flavourant to remove any moisture from the flavourant and produce a flavourant cake. The flavourant cake may be moulded into a desired shape (e.g. a ball) using a mould. Chitosan, together with excipients forming the hydrogel may be then be mixed together to produce the hydrogel composite. The hydrogel composite may be layered in a mould, into which the flavourant cake is inserted. The hydrogel composite may then be rolled to form an outer membrane around the flavourant cake.

[0113] The flavourant layer 208 may include a plurality of microcapsules 302. In use, the sticker 200 may be adhered to a mouthpiece of a smoking substitute apparatus and inserted into a user's mouth. In this manner, the microcapsules 302 may be located in the user's mouth. Then, when the user inhales an aerosol from the smoking substitute apparatus, the aerosol may pass through the central portion 206 of the sticker and thus come into contact with the microcapsules 302 in the flavourant layer 208. As a result, the outer membrane 306 of the microcapsules 302 may disintegrate due to the change in pH caused by the aerosol. This may cause release the flavourant 304 into the user's mouth.

[0114] The features disclosed in the foregoing description, or in the following claims, or in the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a meth-

od or process for obtaining the disclosed results, as appropriate, may, separately, or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

[0115] While the invention has been described in conjunction with the exemplary embodiments described above, many equivalent modifications and variations will be apparent to those skilled in the art when given this disclosure. Accordingly, the exemplary embodiments of the invention set forth above are considered to be illustrative and not limiting. Various changes to the described embodiments may be made without departing from the spirit and scope of the invention.

[0116] For the avoidance of any doubt, any theoretical explanations provided herein are provided for the purposes of improving the understanding of a reader. The inventors do not wish to be bound by any of these theoretical explanations.

[0117] Any section headings used herein are for organizational purposes only and are not to be construed as limiting the subject matter described.

[0118] Throughout this specification, including the claims which follow, unless the context requires otherwise, the words "have", "comprise", and "include", and variations such as "having", "comprises", "comprising", and "including" will be understood to imply the inclusion of a stated integer or step or group of integers or steps but not the exclusion of any other integer or step or group of integers or steps.

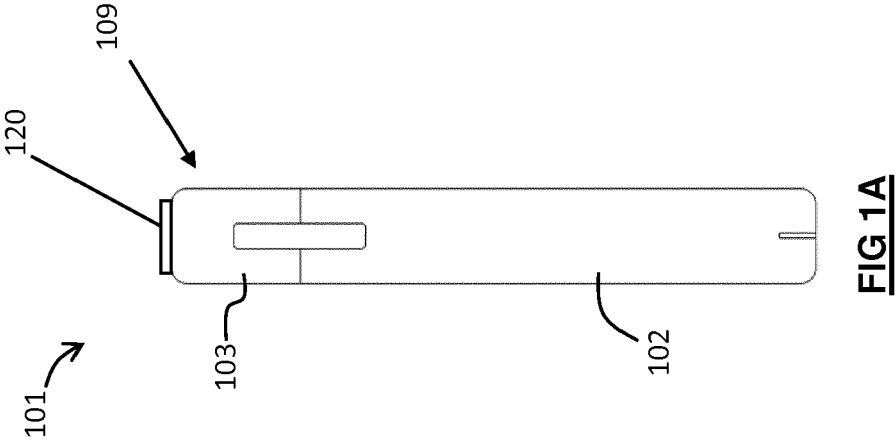
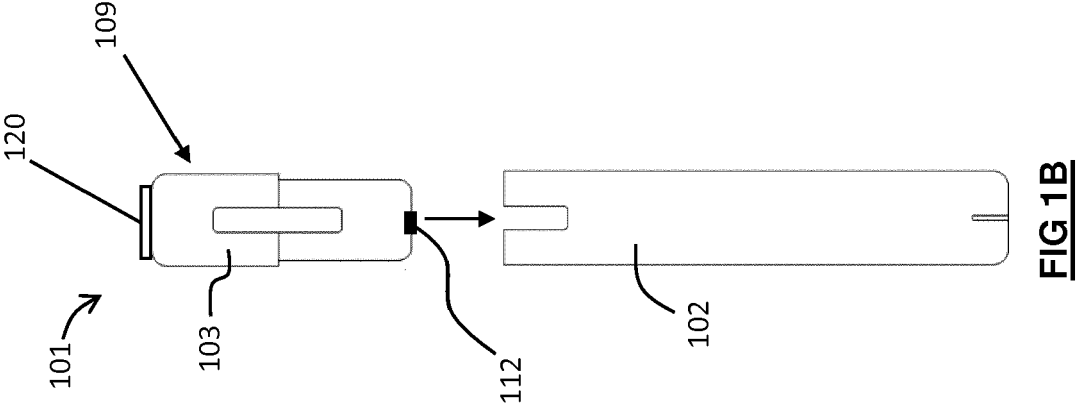
[0119] It must be noted that, as used in the specification and the appended claims, the singular forms "a," "an," and "the" include plural referents unless the context clearly dictates otherwise. Ranges may be expressed herein as from "about" one particular value, and/or to "about" another particular value. When such a range is expressed, another embodiment includes from the one particular value and/or to the other particular value. Similarly, when values are expressed as approximations, by the use of the antecedent "about," it will be understood that the particular value forms another embodiment. The term "about" in relation to a numerical value is optional and means, for example, +/- 10%.

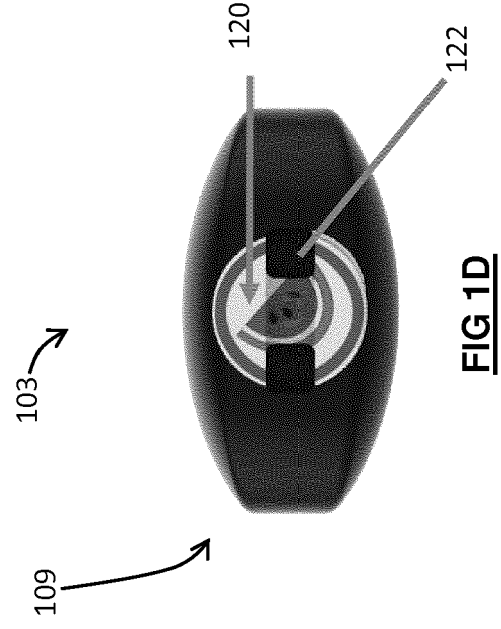
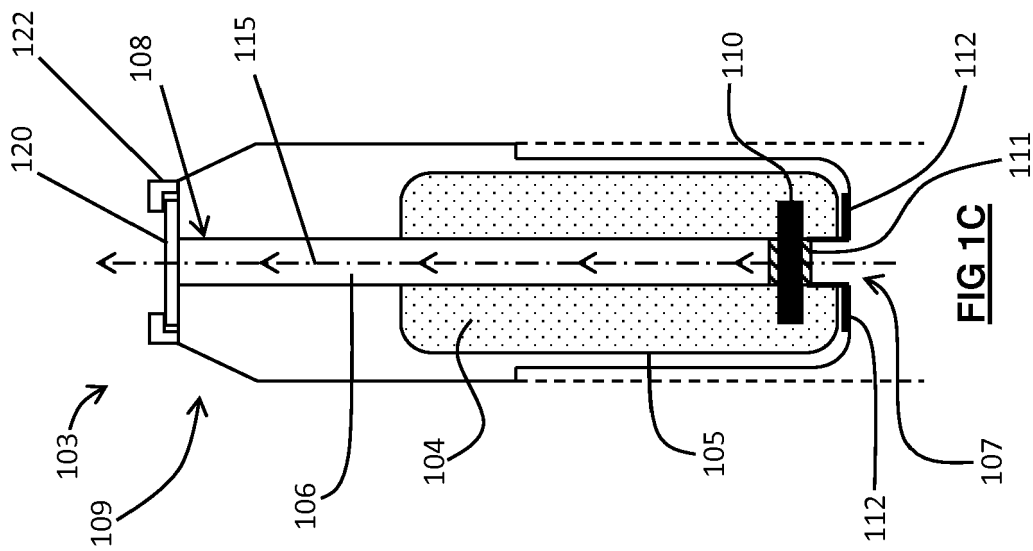
[0120] The words "preferred" and "preferably" are used herein refer to embodiments of the invention that may provide certain benefits under some circumstances. It is to be appreciated, however, that other embodiments may also be preferred under the same or different circumstances. The recitation of one or more preferred embodiments therefore does not mean or imply that other embodiments are not useful, and is not intended to exclude other embodiments from the scope of the disclosure, or from the scope of the claims.

Claims

1. A sticker for use with a smoking substitute apparatus, the sticker comprising:

- an adhesive portion for adhering the sticker to a mouthpiece of the substitute apparatus; and a flavoured portion, the flavoured portion being arranged to cover an outlet of the mouthpiece when the sticker is adhered to the mouthpiece; wherein the flavoured portion is permeable to an aerosol generated by the smoking substitute apparatus.
2. A sticker according to claim 1, wherein the flavoured portion is heat-activated.
 3. A sticker according to claim 1 or 2, wherein the flavoured portion is friction-activated.
 4. A sticker according to any preceding claim, wherein the flavoured portion is activated by the aerosol generated by the smoking substitute apparatus passing through the flavoured portion.
 5. A sticker according to any preceding claim, wherein the flavoured portion includes a removable protective outer layer.
 6. A sticker according to any preceding claim, wherein the flavoured portion includes one or more apertures for transmitting the aerosol generated by the smoking substitute apparatus.
 7. A sticker according to any preceding claim, wherein the flavoured portion includes a porous material for transmitting the aerosol generated by the smoking substitute apparatus.
 8. A sticker according to any preceding claim wherein the adhesive portion includes a ring of adhesive arranged to surround the outlet of the mouthpiece when the sticker is adhered to the mouthpiece.
 9. A sticker according to any preceding claim, wherein the flavoured portion includes a flavourant disposed on a surface of the sticker.
 10. A sticker according to any preceding claim, wherein the flavoured portion includes a flavourant that is embedded in a material forming the flavoured portion.
 11. A smoking substitute apparatus comprising:
 - a mouthpiece with an outlet for delivering an aerosol generated by the smoking substitute apparatus to a user; and
 - a sticker according to any preceding claim, the sticker being adhered to the mouthpiece such that the flavoured portion covers the outlet.
 12. A smoking substitute apparatus according to claim 11, wherein the mouthpiece includes a surface disposed around the outlet and arranged to receive the adhesive portion of the sticker.
 13. A smoking substitute apparatus according to claim 11 or 12, wherein the mouthpiece includes a tab arranged to hold the sticker in place over the mouthpiece.
 14. A smoking substitute kit including:
 - a smoking substitute apparatus, the smoking substitute apparatus having a mouthpiece with an outlet for delivering an aerosol generated by the smoking substitute apparatus to a user; and
 - a sticker according to any one of claims 1 to 10, wherein the flavoured portion of the sticker is arranged to cover the outlet of the mouthpiece when the sticker is adhered to the mouthpiece.
 15. A method of delivering flavour to a user of a smoking substitute apparatus, the smoking substitute apparatus having a mouthpiece with an outlet for conveying an aerosol generated by the smoking substitute system to the user, wherein the method includes:
 - adhering a sticker according to any one of claims 1 to 11 to the mouthpiece so that the flavoured portion of the sticker covers the outlet;
 - generating, in the smoking substitute apparatus, an aerosol; and
 - conveying the generated aerosol to the user via the outlet in the mouthpiece, so that the aerosol passes through the flavoured portion of the sticker.





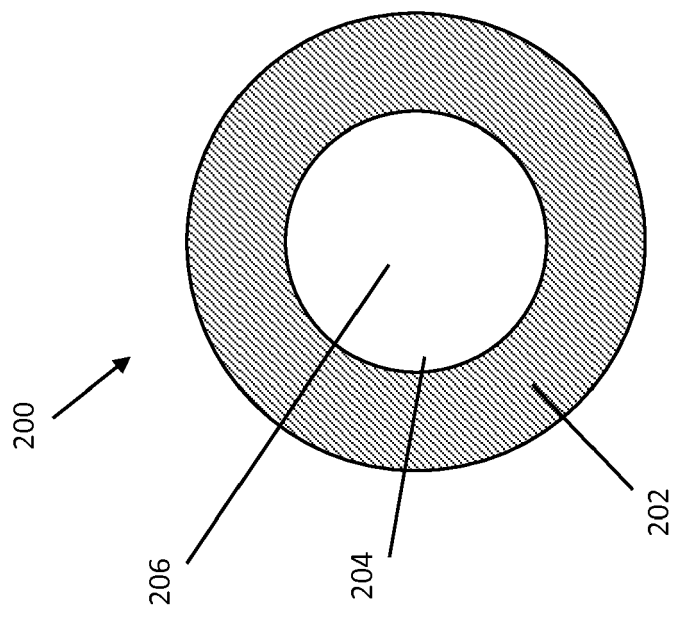


FIG 2B

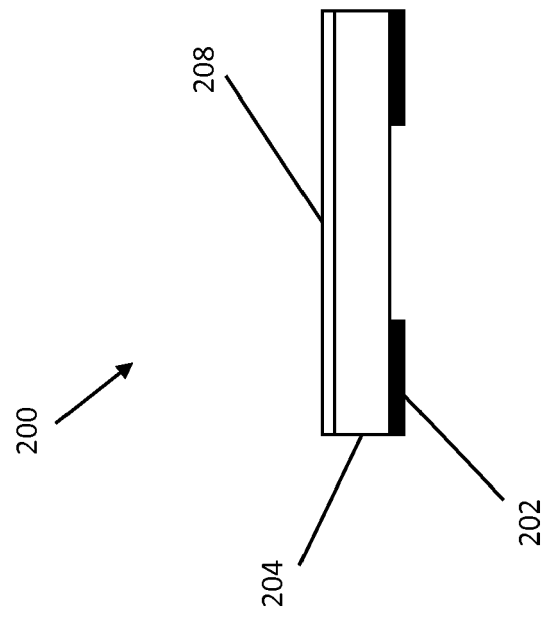


FIG 2A

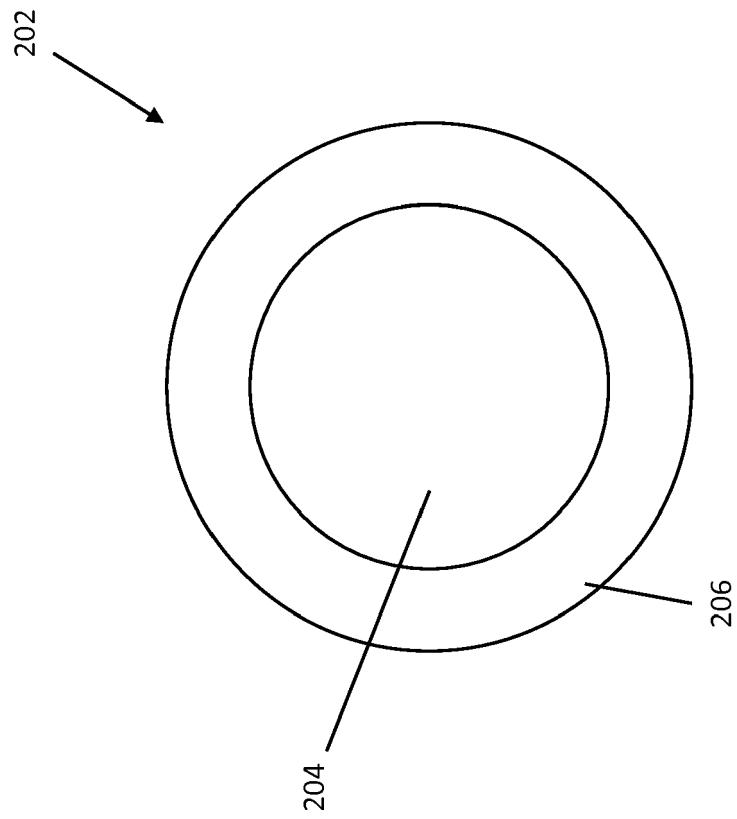


FIG 3



EUROPEAN SEARCH REPORT

Application Number
EP 19 15 5934

5

10

15

20

25

30

35

40

45

50

55

1

EPO FORM 1503 03.82 (P04C01)

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	WO 2014/097294 A1 (SIS RESOURCES LTD [IL]) 26 June 2014 (2014-06-26)	1-6,9,10	INV. A24D3/18 A24F47/00
A	* paragraphs [0027] - [0028]; figure 2 *	7,8, 11-15	

X	WO 2016/187274 A1 (PPG IND OHIO INC [US]) 24 November 2016 (2016-11-24)	1	
A	* abstract *	11	

X	GB 2 497 536 A (CN CREATIVE LTD [GB]) 19 June 2013 (2013-06-19)	1	TECHNICAL FIELDS SEARCHED (IPC) A24D A24F
A	* page 2, lines 4-12 * * page 4, lines 4-14 * * page 9, lines 4-16 * * figures 1,7 *	11,14,15	

A	WO 2014/012840 A2 (PHILIP MORRIS PROD [CH]) 23 January 2014 (2014-01-23) * abstract; figure 1 *	3	

X	US 4 283 011 A (SPECTOR DONALD) 11 August 1981 (1981-08-11)	1	
A	* abstract; figures *	11	

A	EP 3 000 339 A1 (FONTEM HOLDINGS 2 BV [NL]) 30 March 2016 (2016-03-30) * abstract; figure 1 *	11	

The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 2 August 2019	Examiner Kock, Søren
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 19 15 5934

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

02-08-2019

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2014097294 A1	26-06-2014	CA 2895318 A1	26-06-2014
		CN 104853632 A	19-08-2015
		EP 2931070 A1	21-10-2015
		KR 20150144741 A	28-12-2015
		MA 20150370 A1	30-10-2015
		RU 2015129125 A	23-01-2017
		UA 116792 C2	10-05-2018
		US 2014166029 A1	19-06-2014
		US 2018199632 A1	19-07-2018
		US 2019045848 A1	14-02-2019
		WO 2014097294 A1	26-06-2014
WO 2016187274 A1	24-11-2016	BR 112017024357 A2	31-07-2018
		CA 2985834 A1	24-11-2016
		CN 107750123 A	02-03-2018
		EP 3297690 A1	28-03-2018
		JP 2018518253 A	12-07-2018
		KR 20180008683 A	24-01-2018
		TW 201703800 A	01-02-2017
		US 2017000102 A1	05-01-2017
		WO 2016187274 A1	24-11-2016
GB 2497536 A	19-06-2013	NONE	
WO 2014012840 A2	23-01-2014	NONE	
US 4283011 A	11-08-1981	NONE	
EP 3000339 A1	30-03-2016	CN 107105778 A	29-08-2017
		EP 3000339 A1	30-03-2016
		GB 2530588 A	30-03-2016
		US 2017238612 A1	24-08-2017
		WO 2016046116 A1	31-03-2016

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82