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(54) SMOKING SUBSTITUTE APPARATUS

(57) A mouthpiece (520) for a smoking substitute apparatus and method of delivering flavour to a user of a smoking substitute apparatus, the mouthpiece comprising an outlet for conveying an aerosol generated by the smoking substitute apparatus to a user, wherein the mouthpiece is configured to absorb a flavourant (516) applied to a surface of the mouthpiece.

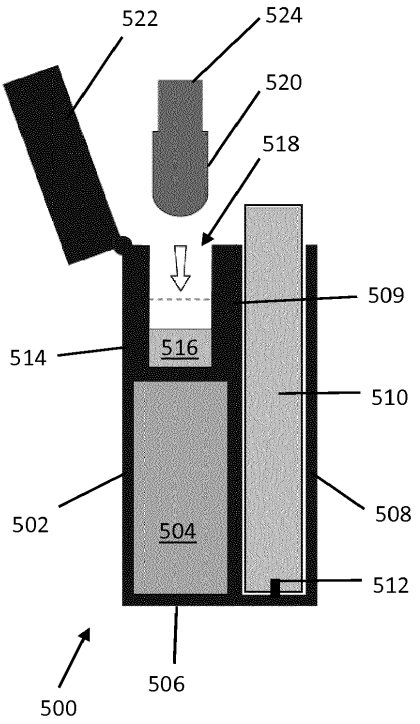

FIG 5A

EP 3 692 825 A1

Description

Field of the Invention

[0001] The present invention relates to a mouthpiece for a smoking substitute apparatus, and to a flavourant dispenser for applying flavourant to the mouthpiece.

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 systems in order to avoid the smoking of tobacco.

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

[0005] Smoking substitute systems 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 systems 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 systems 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 systems as desirable lifestyle accessories. There are a number of different categories of smoking substitute systems, 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 systems, which typically have a sealed tank and heating element. The tank is prefilled with e-liquid and is not intended to be refilled by an end user. One subset of closed system vaping smoking substitute systems 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 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 systems which typically have a tank that is configured to be refilled by a user. In this way the entire device can be used multiple times.

[0012] An example vaping smoking substitute system is the myblu™ e-cigarette. The myblu™ e-cigarette is a closed system which includes a main body and a consumable. 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 degrada-

tion 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 systems, 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 mouthpiece for a smoking substitute apparatus that is arranged to absorb a flavourant applied thereto. In this manner, when a user puts the mouthpiece in their mouth to use the smoking substitute apparatus, flavourant absorbed by the mouthpiece may produce a flavour for the user. In this manner, flavour may be delivered to the user via flavourant on the mouthpiece, 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.

[0021] A flavourant may be applied to the mouthpiece when the user wishes to experience flavour. The user may also apply an amount of flavourant to the mouthpiece according to their taste, e.g. depending on whether they want to experience a strong flavour or not. Flavourants having different flavours may be applied to the mouthpiece, so that the user may experience different flavours, without having to otherwise modify the smoking substitute apparatus. This may improve a versatility of the smoking substitute apparatus.

[0022] According to a first aspect of the invention there is provided a mouthpiece for a smoking substitute apparatus, the mouthpiece comprising an outlet for conveying an aerosol generated by the smoking substitute apparatus to a user, wherein the mouthpiece is configured to absorb a flavourant applied to a surface of the mouthpiece. The mouthpiece may include a material or structure thereon for absorbing flavourant applied to the surface of the mouthpiece. Thus, flavourant applied to the mouthpiece may be absorbed by the mouthpiece, so that flavourant may be delivered to a user when they put the mouthpiece in their mouth.

[0023] The outlet may serve to convey an aerosol from the smoking substitute apparatus to the user, when the mouthpiece is assembled with the smoking substitute apparatus. The outlet may be arranged such that, when the mouthpiece is assembled with the smoking substitute apparatus, the outlet is in fluid communication with an aerosol-conveying passage in the smoking substitute apparatus. In some embodiments, the mouthpiece may be a part or component of the smoking substitute apparatus, e.g. it may be an integral part of the smoking substitute apparatus. In other embodiments, the mouthpiece may be removably mountable on the smoking substitute apparatus or a component thereof.

[0024] The mouthpiece may include a textured surface for absorbing the flavourant applied to the surface of the mouthpiece. This may enable the mouthpiece to efficiently absorb flavourant applied thereto. The textured surface may for example be an area of the mouthpiece having an increased roughness compared to the rest of the mouthpiece. A surface having a high roughness may facilitate retaining flavourant on the mouthpiece. For example, the textured surface may be produced by a applying an abrasive (e.g. a D grade sand paper) to a surface of the mouthpiece to increase the roughness of the surface of the mouthpiece. Where the mouthpiece is made of metal, a roughness of the surface of the mouthpiece may be increased by applying spark erosion and/or electrical discharge machining (EDM) techniques to the surface of the mouthpiece.

[0025] The mouthpiece may also include features thereon which are arranged to retain flavourant, e.g. indents in the surface of the mouthpiece, and/or embossed features. Such features may be integrally formed with the mouthpiece, e.g. they may be moulded as part of the mouthpiece where the mouthpiece is a moulded piece of plastic.

[0026] A surface of the mouthpiece includes a plurality

of channels formed therein for receiving the flavourant applied to the surface of the mouthpiece. The channels may, for example, be formed as grooves in the surface of the mouthpiece. The channels may be arranged to retain a liquid flavourant via capillary action of the liquid flavourant in the channels. The plurality of channels may be arranged to distribute a liquid flavourant applied to the mouthpiece across a surface of the mouthpiece. For example, a liquid flavourant applied to the mouthpiece may be drawn into the channels and wick along the channels through capillary action, so that is distributed over a surface of the mouthpiece. This may enable the flavourant to be distributed over an area of the mouthpiece, which may enhance flavour delivery to the user, e.g. as flavourant may be delivered to the user over a wider area.

[0027] The mouthpiece may include an absorbent material for absorbing the flavourant applied to the surface of the mouthpiece. The absorbent material may be a porous material. In this manner, flavourant applied to the mouthpiece may be absorbed by the absorbent material on the mouthpiece. This may enable the mouthpiece to absorb a larger amount of flavourant, so that the mouthpiece may deliver flavourant to the user for a longer period of time. Use of an absorbent material on the mouthpiece may be particularly beneficial where the flavourant is a liquid flavourant. However, it may also be useful with a flavourant in the form of a powder, a particles of the flavourant powder may enter pores in the absorbent material.

[0028] Any suitable absorbent material may be used. For example the absorbent material may be a cloth material, or a sponge-like material.

[0029] The absorbent material may be a porous plastic. This may facilitate cleaning of the mouthpiece. This may also facilitate making of the mouthpiece, as the porous plastic may be formed into a mouthpiece using a moulding technique. As an example, porous plastics manufactured by Porex corporation may be used.

[0030] In a second aspect of the invention, the mouthpiece of the first aspect of the invention may be included in a smoking substitute apparatus. The mouthpiece may be removably mounted on the smoking substitute apparatus. Alternatively, the mouthpiece may be integrally formed as part of the smoking substitute apparatus.

[0031] 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.

[0032] 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).

[0033] 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).

[0034] 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 together. 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.

[0035] 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.

[0036] 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.

[0037] 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.

[0038] 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.

[0039] 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.

[0040] 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.

[0041] 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.

[0042] 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.

[0043] 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.

[0044] 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.

[0045] The smoking substitute apparatus or main body may comprise a controller, which may include a microprocessor. 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.

[0046] 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.

[0047] 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.

[0048] In a third aspect of the invention, there is provided a flavourant dispenser for dispensing a flavourant onto a surface of a mouthpiece for a smoking substitute apparatus, the flavourant dispenser comprising: a container for containing a flavourant; and a cover having opening for inserting the mouthpiece into the container. The flavourant dispenser of the third aspect of the invention may be used to apply flavourant to a mouthpiece of the first aspect of the invention, and/or a smoking substitute apparatus of the second aspect of the invention.

[0049] To apply flavourant to a surface of a mouthpiece of a smoking substitute apparatus, a user may insert the mouthpiece into the container via the opening so that the mouthpiece comes into contact with flavourant contained in the container. Where the mouthpiece is arranged to absorb flavourant, the mouthpiece may absorb flavourant from the container. After dipping the mouthpiece into the container, the user may put the mouthpiece into their mouth to obtain a flavour. The user may reapply flavourant to the mouthpiece as necessary during use.

[0050] The cover of the flavourant dispenser may include a lid for covering the opening when the flavourant dispenser is not in use. This may keep the flavourant fresh, and avoid contamination of the flavourant.

[0051] The container may be any suitable receptacle for containing a flavourant. The container may come preloaded with flavourant. The container may come in the form of a cartridge which may be loaded into the flavourant dispenser for use. When the cartridge is empty (i.e. when it no longer contains any flavourant), it may be replaced with a new cartridge. Alternatively, the container may be re-fillable, such that a user may refill the container with flavourant as needed.

[0052] The flavourant may be in a liquid, gel, solid, powder or paste form. Flavourant may be transferred from the container to the mouthpiece by inserting the mouthpiece into the container and brining the mouthpiece into contact with flavourant contained in the container.

[0053] 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.

[0054] 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.

[0055] The opening in the cover may have a shape that substantially matches a cross-sectional shape of the mouthpiece. In this manner, the cover may allow insertion of the mouthpiece of the smoking substitute apparatus into the container, whilst preventing other objects which are not intended for use with the flavourant dispenser (e.g. which have a different cross-sectional shape) from being inserted into the container.

[0056] The cover may include a flexible barrier, wherein the opening is formed by a slit in the flexible barrier such that the mouthpiece is insertable through the slit into the container. When no mouthpiece is inserted into the container via the slit, the flexible barrier may be arranged to close the slit and form a seal. In this manner, when the flavourant dispenser is not in use, the flexible barrier may block an opening of the container, to prevent flavourant from escaping from the container, and/or to prevent contamination of flavourant in the container. To insert a mouthpiece into the container, a user may press the mouthpiece into the slit, which may cause the barrier to deform and the slit to open, thus allowing passage of the mouthpiece into the container. Thus, the flexible barrier may be deformable between a first position in which the slit is closed, and a second position in which the slit is open to allow passage of a mouthpiece into the container.

[0057] The barrier may be a membrane or diaphragm made of a flexible, preferably elastic, material, e.g. rubber or silicone. The slit may be arranged to form a seal around the mouthpiece when the mouthpiece is inserted into the container via the slit. This may prevent flavourant from escaping from the container when a mouthpiece is inserted into the container. The flexible barrier may further serve to remove excess flavourant from the surface of the mouthpiece, when the mouthpiece is withdrawn from the slit.

[0058] The flavourant dispenser may include: a plurality of containers for receiving a respective flavourant; a selection mechanism for aligning a selected container with the opening in the cover; wherein the cover is arranged to cover each of the plurality of containers which is not selected. In this manner, a user may select a container containing a desired flavourant, and align the selected container with the opening, so that a mouthpiece may be inserted into the selected container via the opening in the cover. The remaining non-selected containers may be covered by the cover, so that flavourant contained therein may be prevented from escaping and/or from becoming contaminated. This may provide a convenient mechanism for the user to select and apply a desired flavour to a mouthpiece of a smoking substitute apparatus.

[0059] The flavourant dispenser may include an indicator for indicating which of the plurality of containers is currently selected (i.e. which container is currently aligned with the opening). For example, the flavourant dispenser may include a window through which a user may view a label on the selected container.

[0060] The selection mechanism may include a rotatable carousel in which the plurality of containers is disposed, the rotatable carousel being rotatable relative to the cover. Thus, the rotatable carousel may be rotated relative to the cover until a selected container is aligned with the opening, so that the mouthpiece may be inserted into the selected container. The rotatable carousel may include a respective holder for each of the plurality of containers. Alternatively, the containers may be formed as part of the rotatable carousel. In some cases, the plurality of containers may be provided as magazine that is loadable into the rotatable carousel. This may facilitate rapidly replacing the plurality of containers in the rotatable carousel.

[0061] Any suitable mechanism for enabling rotation of the rotatable carousel relative to the cover may be used. In one example, the cover may include a base on which the rotatable carousel is rotatably mounted, so that the carousel may rotated relative to the base, and hence relative to the cover. Alternatively, the cover may be rotatably mounted on the rotatable carousel.

[0062] The rotatable carousel may include a plurality of predefined rotational positions, each rotational position corresponding one of the plurality of containers. To select a container and align it with the opening, the rotatable carousel may be rotated to the rotational position corresponding to that container. The selection mechanism may include an actuator for rotating the rotatable carousel through the rotational positions. In this manner,

the user may operate the actuator to rotate the rotatable relative to the cover until a desired container is selected.

[0063] According to a fourth aspect of the invention, there is provided a smoking substitute kit comprising a smoking substitute apparatus according the second aspect of the invention, and a flavourant dispenser according to the third aspect of the invention. The mouthpiece of the smoking substitute apparatus may be insertable into the container (or the selected container where there is a plurality of containers) via the opening.

[0064] The opening in the cover of the flavourant dispenser may have a shape that substantially matches a cross-sectional shape of the mouthpiece of the smoking substitute apparatus.

[0065] According to a fifth aspect of the invention, there is provided a charger for a smoking substitute apparatus, the charger including: a housing; a battery disposed within the housing; a connector for electrically connecting the battery to a main body of the smoking substitute apparatus; and a container for containing a flavourant, the container being disposed in the housing and arranged to receive a mouthpiece of the smoking substitute apparatus.

[0066] The charger may be used with a mouthpiece according to the first aspect of the invention and/or a smoking substitute apparatus according to the second aspect of the invention. In some cases, the container of the charger may be a container of a flavourant dispenser according to the third aspect of the invention. For example, the flavourant dispenser of the third aspect of the invention may be incorporated into the charger of the fifth aspect of the invention.

[0067] The charger may be used to recharge a battery in a main body of a smoking substitute apparatus, as well as apply flavourant to a mouthpiece of the smoking substitute apparatus (by inserting the mouthpiece into the container). In this manner, the charger may fulfil the dual function of recharging a smoking substitute apparatus and applying flavourant to the smoking substitute apparatus.

[0068] The housing may be a case of the charger in which the battery is housed. The battery may be a rechargeable battery. The housing may include an electrical inteface for connecting the battery to a power source to recharge the battery. The connector for electrically connecting the battery to a main body of the smoking substitute apparatus may be disposed in or on the housing, to facilitate connection of a main body of a smoking substitute apparatus to the connector. The connector may, for example, be a USB or micro-USB connector, or other suitable connector for transferring power from the battery to the smoking substitute apparatus. In this manner, when the main body of the smoking substitute apparatus is connected to the connector, the battery in the charger may recharge a battery in the main body.

[0069] The container may be a receptacle defined in the housing. The container may be arranged to hold a flavourant. The container may include an opening through which the mouthpiece of a smoking substitute apparatus may be inserted, to apply flavourant in the container to the mouthpiece. The opening may have a shape that is complementary to a shape of the mouthpiece, e.g. a shape of the opening may substantially match a cross-sectional shape of the mouthpiece. The opening may further be arranged to hold the mouthpiece in place when it is inserted into the container. In this manner, the mouthpiece may be stored in the charger, so that flavourant in the container is applied to the mouthpiece whilst the mouthpiece is stored in the charger.

[0070] The container may include a removable cap or lid, for preventing flavourant from leaking out of the container.

[0071] The container may include a flexible barrier covering the opening, the flexible barrier having a slit therein such that the mouthpiece is insertable through the slit into the container. The flexible barrier may be similar to the one described above in relation to the flavourant dispenser. In this manner, the flexible barrier may effectively form a seal over the opening of the container when no mouthpiece is inserted into the container. This may prevent flavourant from leaking out of the container into the rest of the charger. To apply flavourant to a mouthpiece, the mouthpiece may be inserted into the container via the slit in the flexible barrier.

[0072] The housing may include a closable lid wherein, when the mouthpiece is received in the container, the lid is arranged to hold the mouthpiece in the container when the lid is closed. In this manner the mouthpiece may be stored in the charger by inserting the mouthpiece into the container, and closing the lid. In this configuration, flavourant in the container may be transferred to a surface of the mouthpiece and/or absorbed by the mouthpiece. In this manner, the mouthpiece may be ready for use when the user opens the lid and retrieves the mouthpiece from the container. Thus the charger may provide a convenient solution for storing and transporting a mouthpiece of the smoking substitute apparatus.

[0073] The lid may be pivotably mounted on the housing, so that it is pivotable between an open position and a closed position. Other mechanisms for opening and closing the lid may also be used. In some cases, the lid may be removable from the housing. In such cases, the lid and housing may include engagement means for securing the lid to the housing (e.g. threads for forming a threaded connection).

[0074] The lid may include a surface which is arranged to abut against a mouthpiece received in the container, to hold the mouthpiece in the container. In this manner, the mouthpiece may be securely held in the container when the lid is closed.

[0075] The connector for electrically connecting the battery to a main body of the smoking substitute apparatus may be disposed within a holder portion of the housing, the holder portion being arranged to receive the main body of the smoking substitute apparatus when the main body is connected to the connector, and wherein the hold-

er portion is separate from the container. In this manner, the main body of the smoking substitute apparatus may be stored in the holder portion when the main body is connected to the connector for charging. The charger may thus facilitate storage and transport of the smoking substitute apparatus whilst charging the apparatus.

[0076] The connector may be disposed within the holder portion, so that the main body may be plugged into the connector when the main body is inserted into the holder portion.

[0077] The holder portion may, for example, be a recess or cavity defined in the housing which is shaped to receive the main body of the smoking substitute apparatus. In this manner, the housing may substantially surround the main body when the main body is received in the holder portion. This may serve to protect the main body.

[0078] The holder portion being separate from the container, may avoid flavourant in the container from entering the holder portion, which could result in a faulty connection between the main body and the connector. For example, the holder portion and the container may be separated by an inner wall of the housing.

[0079] The holder portion may be arranged to allow a user to use the smoking substitute apparatus when the main body of the smoking substitute apparatus is received in the holder portion. In this manner, the user may use the smoking substitute apparatus during charging. For example, a mouthpiece of the smoking substitute apparatus mounted on the main body may protrude from the holder portion when the main body is received in the holder portion, to enable a user to use the smoking substitute apparatus.

[0080] The charger may be used to store a mouthpiece and a main body of the smoking substitute apparatus. In particular, the mouthpiece may be stored in the container so that flavourant in the container is applied to the mouthpiece, and the main body may be stored in the holder portion to charge the main body. Then, to use the smoking substitute apparatus, the user may remove the mouthpiece from the container and connect it to the main body. The main body may be removed from the holder portion for use, or it may be left in the holder portion so that it is charging during use.

[0081] According to a sixth aspect of the invention, there is provided a smoking substitute kit including a charger according to the fifth aspect of the invention and a smoking substitute apparatus according to the second aspect of the invention. The smoking substitute apparatus may include a mouthpiece which is receivable in the container of the charger to apply flavourant in the container to the mouthpiece. The smoking substitute apparatus may include a main body having a charging interface that is connectable to the connector in the charger to charge a rechargeable battery in the main body. Where the charger includes a holder portion, the holder portion may be arranged to receive the main body when the main body is connected to the connector.

[0082] According to a seventh aspect of the invention, there is provided a method of delivering flavour to a user of a smoking substitute apparatus, the method including: applying a flavourant to a mouthpiece of the smoking substitute apparatus; placing the mouthpiece with the flavourant in a user's mouth; and inhaling, via the mouthpiece, an aerosol generated by the smoking substitute apparatus. In this manner, the mouthpiece may deliver flavourant to the user when the user uses the smoking substitute apparatus. The method of the seventh aspect of the invention may be used with any of the previous aspects of the invention.

[0083] 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

[0084] 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 a first embodiment of the invention, in an engaged position;

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

Figure 1C is a section view of a smoking substitute apparatus of the first embodiment;

Figures 2A-2C illustrate a process of applying a flavourant to a mouthpiece according to an embodiment of the invention;

Figures 3A-3C illustrate a process of applying a flavourant to a mouthpiece using a flavourant dispenser according to an embodiment of the invention;

Figure 4A shows a top view of a carousel of a flavourant dispenser that is an embodiment of the invention, whilst Figure 4B shows a top view of a cover of the flavourant dispenser;

Figures 5A-5C show cross-sectional side views of a charger according to an embodiment of the invention.

Detailed Description of the Invention

[0085] 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.

[0086] 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. The consumable 103 is illustrated in more detail in Figure 1C.

[0087] 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.

[0088] 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.

[0089] 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).

[0090] 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).

[0091] 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 passage106) 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).

[0092] 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.

[0093] 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.

[0094] 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.

[0095] The mouthpiece 109 of the consumable 103 is configured to absorb a flavourant applied to a surface of the mouthpiece. In particular, the mouthpiece 109 includes an absorbent material 120 disposed adjacent to the outlet 108. The absorbent material may be a porous material, e.g. a porous plastic. In this manner, when a flavourant is applied to the mouthpiece, the absorbent material 120 may absorb the flavourant. Then, when a user puts the mouthpiece 109 in their mouth to inhale an aerosol, flavourant stored in the absorbent material 120 may be delivered to the user to produce a flavour for the user.

[0096] The absorbent material 120 may be particularly beneficial where the flavourant is provided as a liquid, paste, or gel, as the flavourant may then easily penetrate pores in the absorbent material 120.

[0097] In other embodiments (not shown) different textures and/or structures may be provided on the surface of the mouthpiece 109 to absorb flavourant applied thereto. For example, the mouthpiece 109 could include a textured surface to increase retention of flavourant on the surface of the mouthpiece. The mouthpiece 109 could also include a plurality of capillary channels on its surface, for receiving a liquid flavourant and distributing the flavourant across an area of the mouthpiece.

[0098] In some embodiments, no absorbent material or surface features may be provided for absorbing flavourant. Then, the flavourant may simply be applied to the surface of the mouthpiece, and the flavourant may then be directly transferred to the user's mouth when the user puts the mouthpiece in their mouth.

[0099] Figures 2A-2C illustrates a process of applying a flavourant to a mouthpiece 202 of a smoking substitute apparatus in the form of consumable 200. The mouthpiece 202 and consumable 200 may respectively be similar in configuration to mouthpiece 109 of consumable 103 discussed above. In particular, the consumable 200 is configured for engagement with a main body of a smoking substitute system.

[0100] As shown in Figure 2B, the mouthpiece 202 is approached towards a container 204 containing a flavourant 206. The flavourant 206 may be in liquid, paste or gel form. Alternatively, the flavourant may be provided as a powder. In Figure 2B, the mouthpiece 202 is inserted into the container 204 to dip the mouthpiece 202 into the flavourant 206. When the mouthpiece 202 comes into contact with the flavourant 206, flavourant 206 may be transferred from the container 204 to the mouthpiece 202. Where the mouthpiece 202 includes an absorbent material (e.g. absorbent material 120), flavourant may be absorbed by the absorbent material. In Figure 2C, the mouthpiece 202 is withdrawn from the container 204, leaving an amount of flavourant 206 on the mouthpiece 202. In this manner, when a user uses the consumable, e.g. by engaging the consumable 200 with a main body of a smoking substitute system and inserting the mouthpiece into their mouth, they may receive flavourant 206 carried by the mouthpiece 202.

[0101] Figures 3A-3C illustrate a process of applying a flavourant to a mouthpiece 302 of a smoking substitute apparatus in the form of consumable 300. The mouthpiece 302 and consumable 300 may respectively be similar in configuration to mouthpiece 109 of consumable 103 discussed above. In particular, the consumable 300 is configured for engagement with a main body of a smoking substitute system.

[0102] Flavourant is applied to the mouthpiece 302 using a flavourant dispenser 304 that is an embodiment of the invention. The flavourant dispenser 304 is illustrated in Figure 3A. The flavourant dispenser 304 includes a container 306 containing a flavourant 308. The flavourant dispenser 304 further includes a cover in the form of a flexible barrier 310 which covers an opening of the container 306. The flexible barrier 310 may be an elastic membrane, for example made of rubber or silicone.

[0103] The flexible barrier 310 includes a slit (not shown) formed therein, which is arranged to open to allow passage of a mouthpiece into the container 306 when the mouthpiece is pressed against the flexible barrier 310. In other words, when a mouthpiece is pressed against the flexible barrier 310, the flexible barrier 310 deforms, causing the slit to open and allow passage of the mouthpiece into the container 306. When the flavourant dispenser 304 is not in use, the slit in the flexible barrier may form a seal which is substantially impermeable to flavourant 308 contained in the container 306. Thus, the flexible barrier may be deformable between a first position in which the slit is closed (Figure 3A), and a second position in which the slit is open to allow passage of a mouthpiece into the container 306 (Figure 3B). In this manner, the flexible barrier 310 may prevent flavourant 308 from leaking out of the container 306.

[0104] In Figure 3B, the mouthpiece 302 is inserted into the container 306 via the slit in the flexible barrier 310. As can be seen, the flexible barrier 310 is deformed

due to the mouthpiece 310 pressing against the flexible barrier 310. This causes the slit in the flexible barrier to open, so that the mouthpiece 302 may come into contact with the flavourant 308 in the container 306. Whilst the mouthpiece 302 is in contact with the flavourant 308, flavourant may be absorbed by the mouthpiece (e.g. by an absorbent material on the mouthpiece) and/or deposited on a surface of the mouthpiece 302. The flexible barrier 310 may form a seal around the mouthpiece 302 while the mouthpiece 302 is inserted into the container 306, to prevent leakage of the flavourant 308.

[0105] In Figure 3C, the mouthpiece 302 is withdrawn from the container 306. As the mouthpiece 302 is withdrawn from the slit in the flexible barrier 310, the flexible barrier 310 may act to remove excess flavourant 308 from the surface of the mouthpiece 302. This may prevent the mouthpiece 302 from dripping flavourant when the mouthpiece 302 is removed from the container 306.

[0106] Figures 4A and 4B illustrate components of a flavourant dispenser according to an embodiment of the invention. Figure 4A shows a top view of a carousel 404 of the flavourant dispenser, whilst Figure 4B shows a top view of a cover 406 of the flavourant dispenser. As discussed below, the carousel 404 and the cover 406 may be assembled together to form a flavourant dispenser according to the invention.

[0107] The flavourant dispenser includes a set of five containers 402a-e which are provided in the form of a series of compartments in the carousel 404. Each of the five containers 402a-e contains a flavourant corresponding to a different flavour. The five containers 402a-e are disposed substantially rotationally symmetrically about a central axis of the carousel 404.

[0108] The cover 406 includes an opening 408. The opening 408 has a shape that substantially matches a cross-sectional shape of a mouthpiece (e.g. mouthpiece 109) of a smoking substitute apparatus. In this manner, the shape of the opening 408 may allow the mouthpiece to be inserted through the opening, whilst preventing other objects from being inserted through the opening 408.

[0109] The cover 406 is mountable on the carousel 404 such that the rotatable carousel 404 and cover 406 are rotatable relative to one another. For example, the cover 406 may include roller bearings arranged to enable rotation of the cover relative to the carousel 404. As another example, the cover 404 may be fixed relative to a base on which the carousel 404 is rotatably mounted (e.g. via a set of ball bearings). When the cover 406 is mounted on the carousel 404, the cover is arranged to cover all of the containers 402a-e in the carousel 404.

[0110] In use, the carousel 404 may be rotated relative to the cover 406, to align the opening 408 in the cover 406 with a desired one of the containers 402a-e. When the opening 408 is aligned with the one of the containers 402a-e, a mouthpiece may be inserted into that container via the opening, to apply flavourant from that container to the mouthpiece. In this manner, a user may selected a desired flavour from the available flavours in the carousel 404, rotate the carousel 404 relative to the cover 406 until the corresponding container is aligned with the opening 408, and insert the mouthpiece into the corresponding container via the opening 408. Containers which are not aligned with the opening 408 are covered by the cover 406. This may prevent flavourant from escaping from the containers, and/or flavourant in the containers from being contaminated (e.g. by dirt entering the containers).

[0111] The carousel 404 and/or cover 406 may include an indicator for indicating which flavour is currently "selected", i.e. which container is currently aligned with the opening 408. For example, the carousel 404 and/or cover 406 may include a window for displaying a label of a container currently aligned with the opening 408.

[0112] The carousel 404 may be rotatable relative to cover 406 between a series of predefined rotational positions, where each of the rotational positions corresponds to alignment of a respective container with the opening 408. This may facilitate aligning a desired container with the opening 408.

[0113] The containers 402a-e may be formed as part of the carousel 404. Alternatively, the carousel 404 may include a series of holders for receiving the containers, so that the containers may be loaded into the holders in the carousel 404. The containers 402a-e may be individually loaded into the holders in the carousel. Alternatively, the containers 402a-e may be provided as part of a magazine (or cartridge) that is loadable into the carousel 404.

[0114] The cover 406 may include a flexible barrier disposed across the opening 408, the flexible barrier having a slit through which a mouthpiece of a smoking substitute apparatus may be inserted. The flexible barrier may be similar to the flexible barrier described above in relation to Figures 3A-3C. The combination of the shape of the opening 408 and a flexible barrier may serve to prevent leakage of flavourant from the containers, whilst avoid unwanted objects being inserted through the opening 408. Additionally or alternatively, a lid (not shown), may be provided to close the opening 408 when the flavourant dispenser is not in use.

[0115] Figures 5A-5C illustrate a charger 500 according to an embodiment of the invention. The charger 500 includes a housing 502 containing a battery 504 disposed in a battery compartment 506 of the housing 502. The battery 504 may be a rechargeable battery, in which case the housing 502 may include a connection interface (not shown) for connecting the rechargeable battery to an external power source to recharge the battery. The housing 502 further includes a holder portion 508 for receiving a main body of a smoking substitute system. In Figures 5A-5C, a main body 510 of a smoking substitute system is received in the holder portion 508 of the housing 502. For example, the main body 510 may correspond to the main body 102 described above in relation to system 101.

[0116] The holder portion 508 is formed as a recess or cavity in the housing 502, so that the housing 502 surrounds the main body 510 when the main body 510 is

received within the holder portion 508. A cross-sectional shape of the holder portion 508 may substantially match a cross-sectional shape of the main body 502, so that the main body 510 may be securely held within the holder portion 508.

[0117] The charger 500 further includes a connector 512 disposed within the holder portion 508 of the housing 502, and arranged to engage with a corresponding connector (not shown) on the main body 510. The connector 512 is arranged to electrically connect the battery 504 in the charger to the main body 510, to recharge a battery in the main body 510. In this manner, when the main body 510 is received in the holder portion 508, it may be connected to the connector 512 so that it may be recharged. The connector 512 is located at a distal end of the holder portion 508, so that the main body 510 may be connected to the connector 512 by pushing the main body 510 into the holder portion 508.

[0118] The charger 500 further includes a container 514 defined in the housing 502 and disposed adjacent to the holder portion 508. The container 514 is separated from the holder portion 508 by an inner wall 509 of the housing 502. The container 514 is arranged to contain a flavourant 516, and includes an opening 518 through which a mouthpiece 520 of a smoking substitute system is insertable to bring the mouthpiece 520 into contact with flavourant 516 in the container 514. A shape of the opening 518 may substantially match a cross-sectional shape of the mouthpiece 520, so that when the mouthpiece 520 is inserted into the container 514, the mouthpiece 520 may form an interference fit with the opening 518. In this manner, the mouthpiece 520 be held in the container 514 so that a portion of the mouthpiece is in contact with the flavourant 516 in the container 514. The container may include a flexible barrier (not shown) disposed across the opening 518, the flexible barrier having a slit through which a mouthpiece of a smoking substitute apparatus may be inserted. The flexible barrier may be similar to the flexible barrier described above in relation to Figures 3A-3C. This may prevent leakage of flavourant from the container 514. A cover (not shown) may also be provided to seal the container 514 when the container is not in use.

[0119] The charger 500 further includes a lid 522 that is pivotably mounted on the housing, the lid 522 being pivotable between an open and a closed position. When the lid 522 is in the open position, the holder portion 508 and the container 514 are accessible. Thus, the lid 522 may be opened to insert the main body 510 into the holder portion 508, and/or to insert the mouthpiece 520 into the container 514. When the lid 522 is in the closed position, the lid 522 is arranged to hold a main body received in the holder portion 508 in place inside the holder portion, i.e. the lid 522 prevents the main body from falling out of the holder portion 508. In the closed position, the lid 522 is further arranged to hold a mouthpiece received in the container in the container.

[0120] Use of the charger will now be described with reference to Figures 5A-5C. In Figure 5A, the mouthpiece 520 of a consumable 524 is approached towards the opening 518 of the container 514, with the lid 522 in the open position. The consumable 524 may, for example, correspond to consumable 103 described above, and may be arranged for engagement with the main body 510 to form a smoking substitute system. The mouthpiece 520 is then inserted into the container 514 and comes into contact with the flavourant 516, so that flavourant is absorbed by the mouthpiece 520 and/or deposited on a surface of the mouthpiece 520.

[0121] In Fig. 5B, the lid 522 is in the closed position, with the mouthpiece 522 still received in the container 514. In the closed position, the lid 522, the lid is arranged to press against an end of the consumable 524, to maintain the mouthpiece 520 in the container 514 and in contact with the flavourant 516. In this manner, flavourant may be applied to the mouthpiece 520 whilst the consumable 524 is stored in the charger 500.

[0122] In Fig. 5C, the lid 522 is in the open position, so that the consumable 524 may be retrieved. As shown in in Fig. 5C, when the mouthpiece 520 is removed from the container 514, the mouthpiece 520 retains some flavourant 516. The consumable 524 may then be engaged with the main body 510 to form a smoking substitute system. The consumable 524 may be engaged with the main body 510, whilst the main body is still received within the holder portion 508. In this manner, the main body 510 may still be charged while using the smoking substitute system. Alternatively, the main body 510 may be removed from the holder portion 508, to assemble the consumable 524 with the main body 510 outside of the charger 500.

[0123] Thus the charger 500 enables a smoking substitute system to be recharged, and flavourant to be applied to a mouthpiece of the system. Moreover, the charger 500 enables both the consumable 524 (including the mouthpiece 520) and the main body 510 of the system to be stored whilst charging the main body 510 and applying flavourant to the mouthpiece 520. The charger may thus provide a convenient mechanism for storing and transporting a smoking substitute system.

[0124] 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 method 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.

[0125] 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.

[0126] 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.

[0127] Any section headings used herein are for organizational purposes only and are not to be construed as limiting the subject matter described.

[0128] 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.

[0129] 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%.

[0130] 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 flavourant dispenser for dispensing a flavourant onto a surface of a mouthpiece for a smoking substitute apparatus, the flavourant dispenser comprising:

   a container for containing a flavourant; and
   a cover having opening for inserting the mouthpiece into the container.

2. A flavourant dispenser according to claim 1, wherein the opening has a shape that substantially matches a cross-sectional shape of the mouthpiece.

3. A flavourant dispenser according to claim 1or 2, wherein the cover includes a flexible barrier, and wherein the opening is formed by a slit in the flexible barrier such that the mouthpiece is insertable through the slit into the container.

4. A flavourant dispenser according to one of claims 1 to 3, including:

   a plurality of containers for receiving a respective flavourant;
   a selection mechanism for aligning a selected container with the opening in the cover;
   wherein the cover is arranged to cover each of the plurality of containers which is not selected.

5. A flavourant dispenser according to claim 4, wherein the selection mechanism includes a rotatable carousel in which the plurality of containers is disposed, the rotatable carousel being rotatable relative to the cover.

6. A smoking substitute kit comprising a smoking substitute apparatus according to claim 6 and a flavourant dispenser according to one of claim 1 to 5.

7. A charger for a smoking substitute apparatus, the charger including:

   a housing;
   a battery disposed within the housing;
   a connector for electrically connecting the battery to a main body of the smoking substitute apparatus; and
   a container for containing a flavourant, the container being disposed in the housing and arranged to receive a mouthpiece of the smoking substitute apparatus.

8. A charger according to claim 7, wherein the housing includes a closable lid, and wherein, when the mouthpiece is received in the container, the lid is arranged to hold the mouthpiece in the container when the lid is closed.

9. A charger according to claim 7 or 8, wherein the connector is disposed within a holder portion of the housing, the holder portion being arranged to receive the main body of the smoking substitute apparatus when the main body is connected to the connector, and wherein the holder portion is separate from the container.

10. A smoking substitute kit comprising a smoking substitute apparatus according to claim 6 and a charger according to one of claims 7 to 9.

11. A mouthpiece for a smoking substitute apparatus, the mouthpiece comprising an outlet for conveying an aerosol generated by the smoking substitute ap-

paratus to a user, wherein the mouthpiece is configured to absorb a flavourant applied to a surface of the mouthpiece.

12. A mouthpiece according to claim 11, wherein the mouthpiece includes a textured surface for absorbing the flavourant applied to the surface of the mouthpiece.

13. A mouthpiece according to claim 11 or 12, wherein a surface of the mouthpiece includes a plurality of channels formed therein for receiving the flavourant applied to the surface of the mouthpiece.

14. A mouthpiece according to any one of claims 11 to 13, wherein the mouthpiece includes an absorbent material for absorbing the flavourant applied to the surface of the mouthpiece.

15. A mouthpiece according to claim 14, wherein the absorbent material is a porous plastic.

16. A smoking substitute apparatus including a mouthpiece according to any one of claims 11 to 15.

17. A method of delivering flavour to a user of a smoking substitute apparatus, the method including:

applying a flavourant to a mouthpiece of the smoking substitute apparatus;
placing the mouthpiece with the flavourant in a user's mouth; and
inhaling, via the mouthpiece, an aerosol generated by the smoking substitute apparatus.

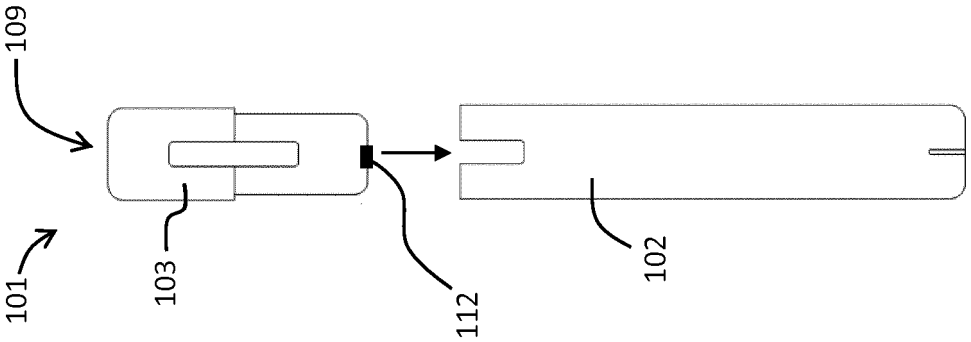

FIG 1B

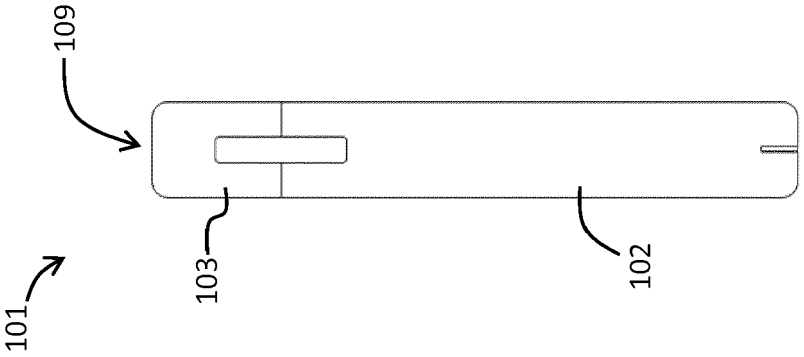

FIG 1A

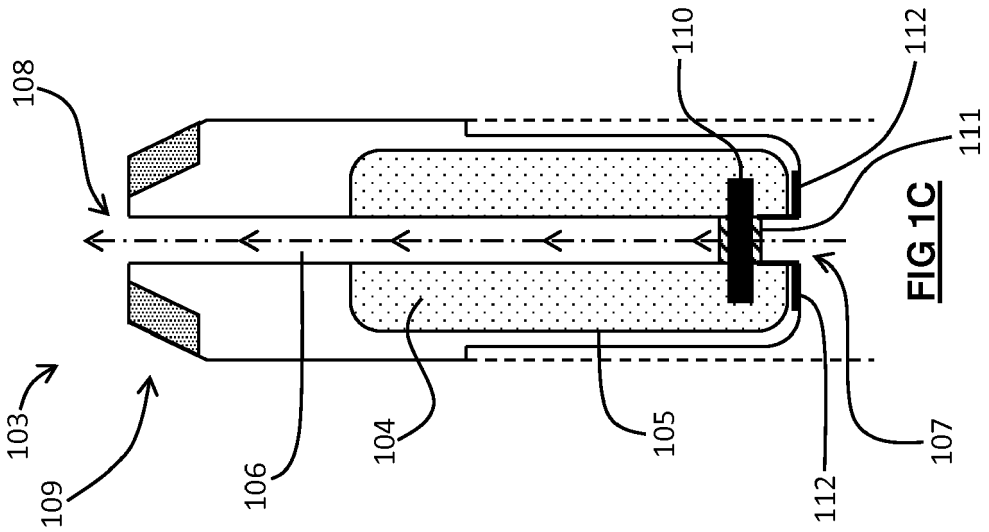

FIG 1C

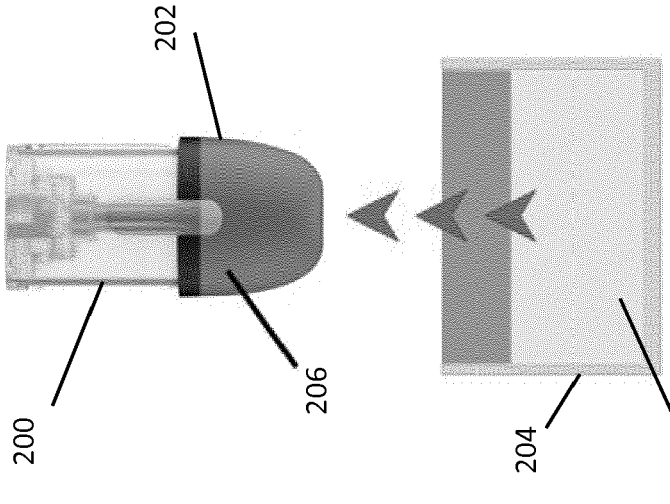

FIG 2C

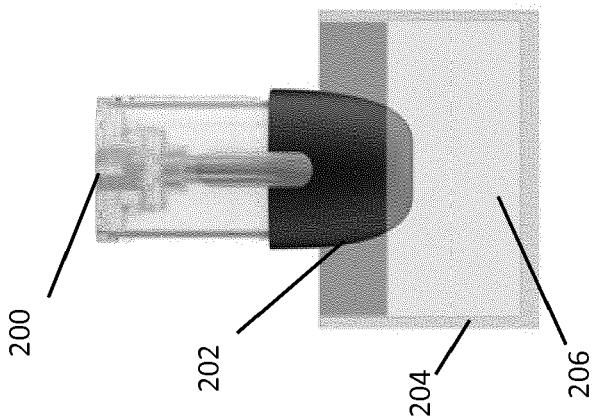

FIG 2B

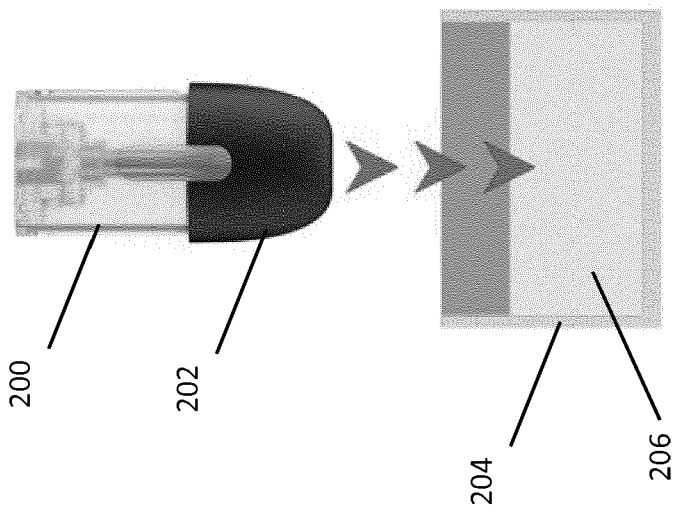

FIG 2A

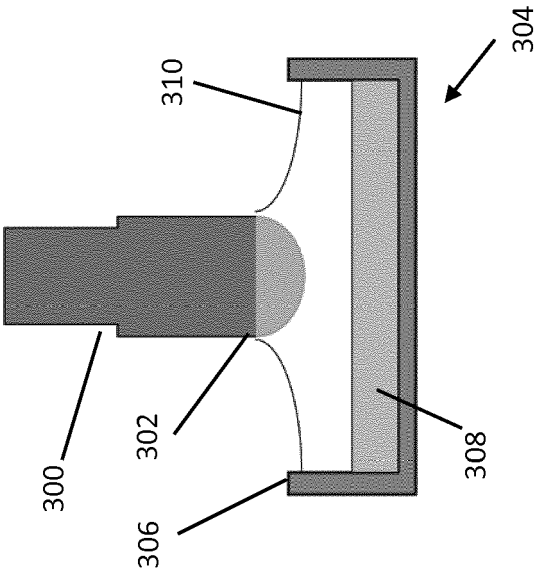

FIG 3C

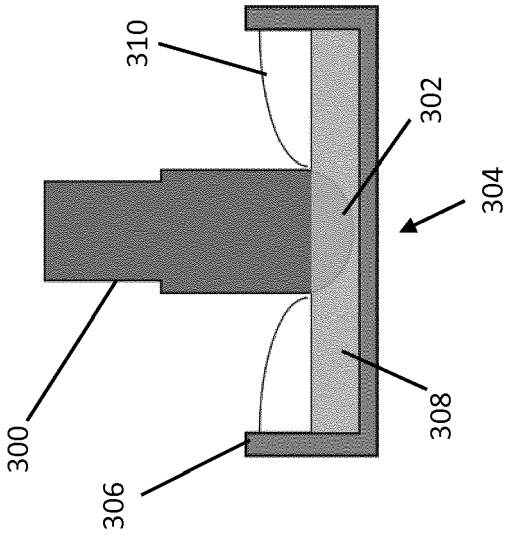

FIG 3B

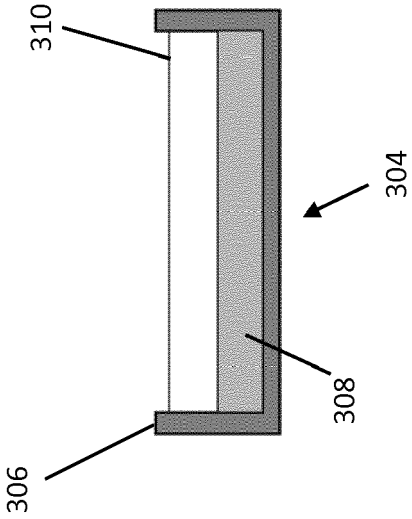

FIG 3A

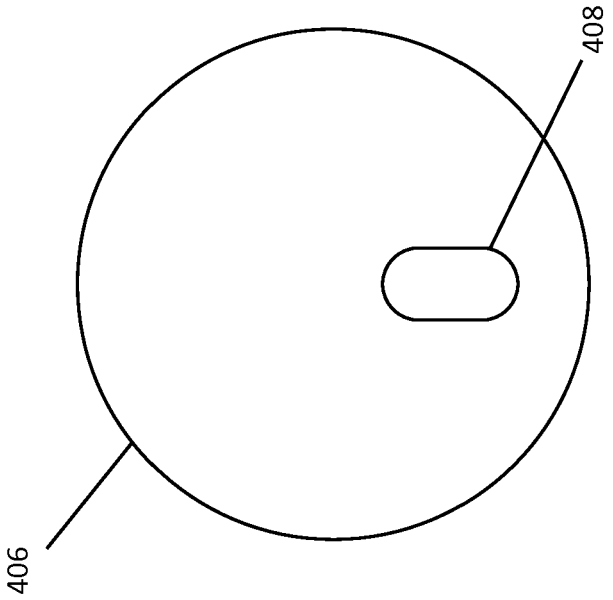

FIG 4B

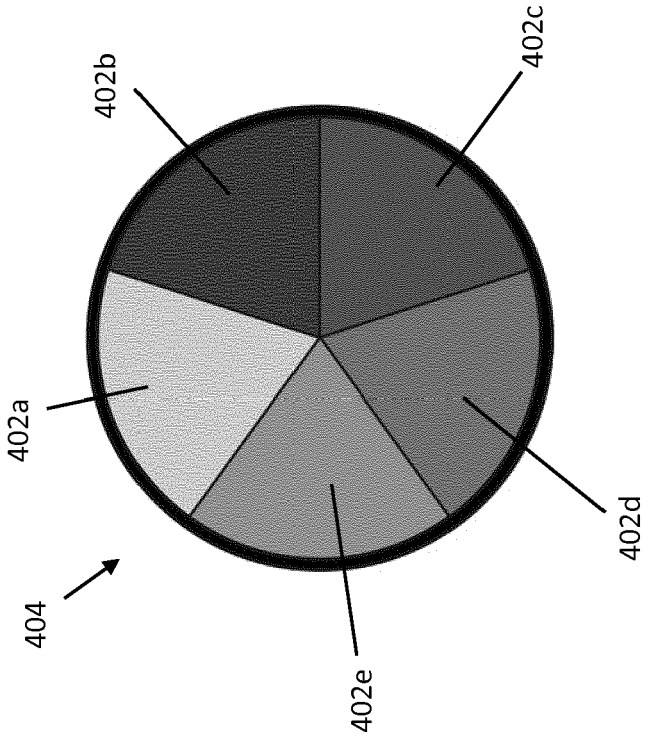

FIG 4A

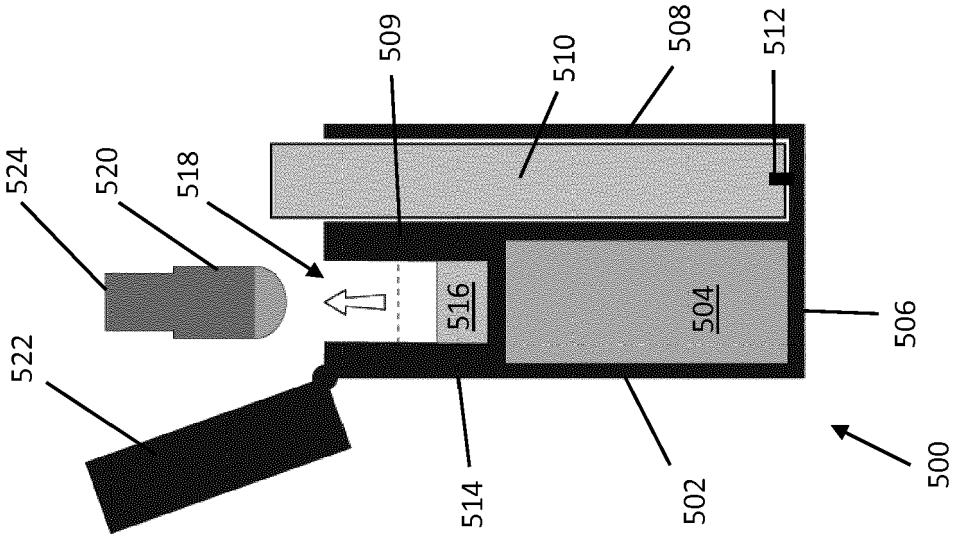

FIG 5C

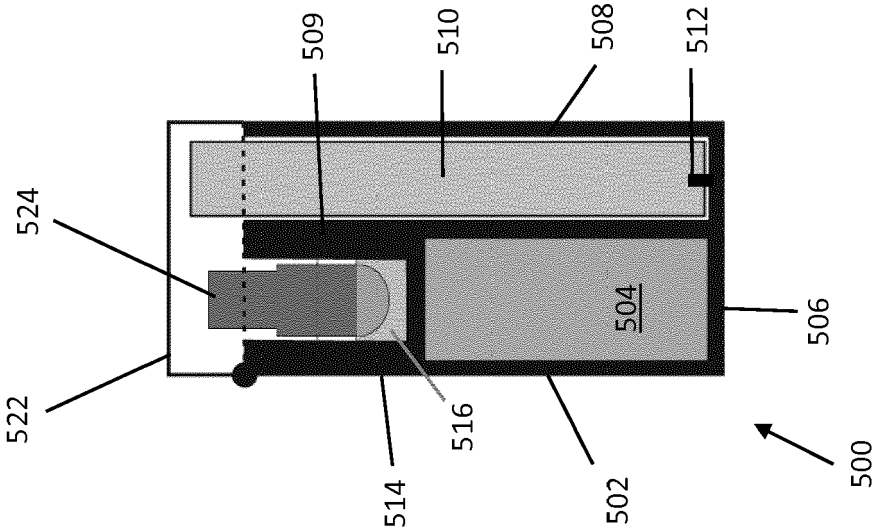

FIG 5B

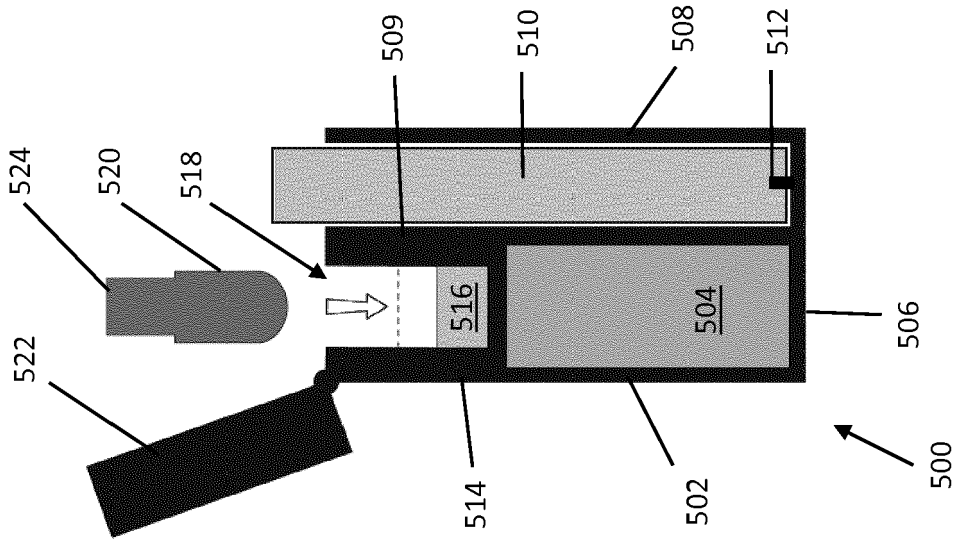

FIG 5A

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EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	7 August 2019	Espla, Alexandre

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	7 August 2019	Espla, Alexandre

CATEGORY OF CITED DOCUMENTS

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