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(54) **AEROSOL PROVISION SYSTEM AND METHOD**

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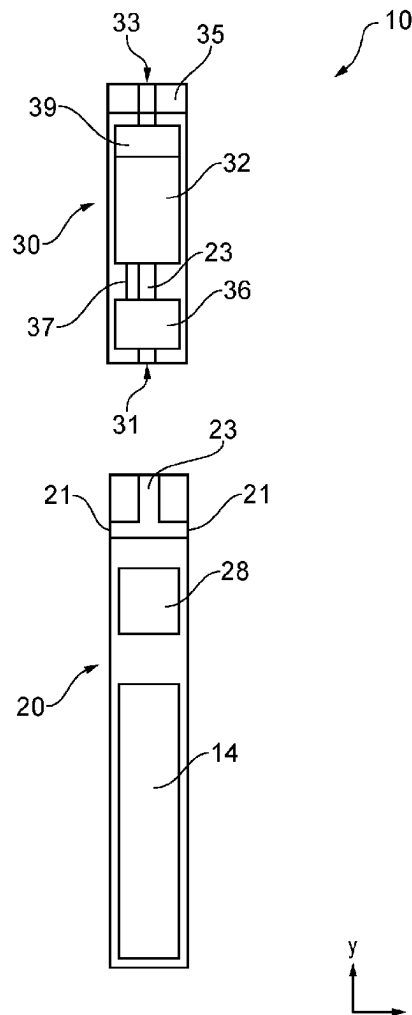
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ABSTRACT

Described is an aerosol provision system comprises a first air channel extending from an air inlet to a first outlet via an aerosol generation region, an aerosol generator for generating aerosol from aerosol-generating material to generate aerosol in the aerosol generation region, a second air channel extending at least in part from an airflow controller to a second outlet, and control circuitry configured to control the airflow controller to deliver one or more puffs of air to a user of the aerosol provision system via the second outlet in response to determining a condition for providing a notification to the user is met.



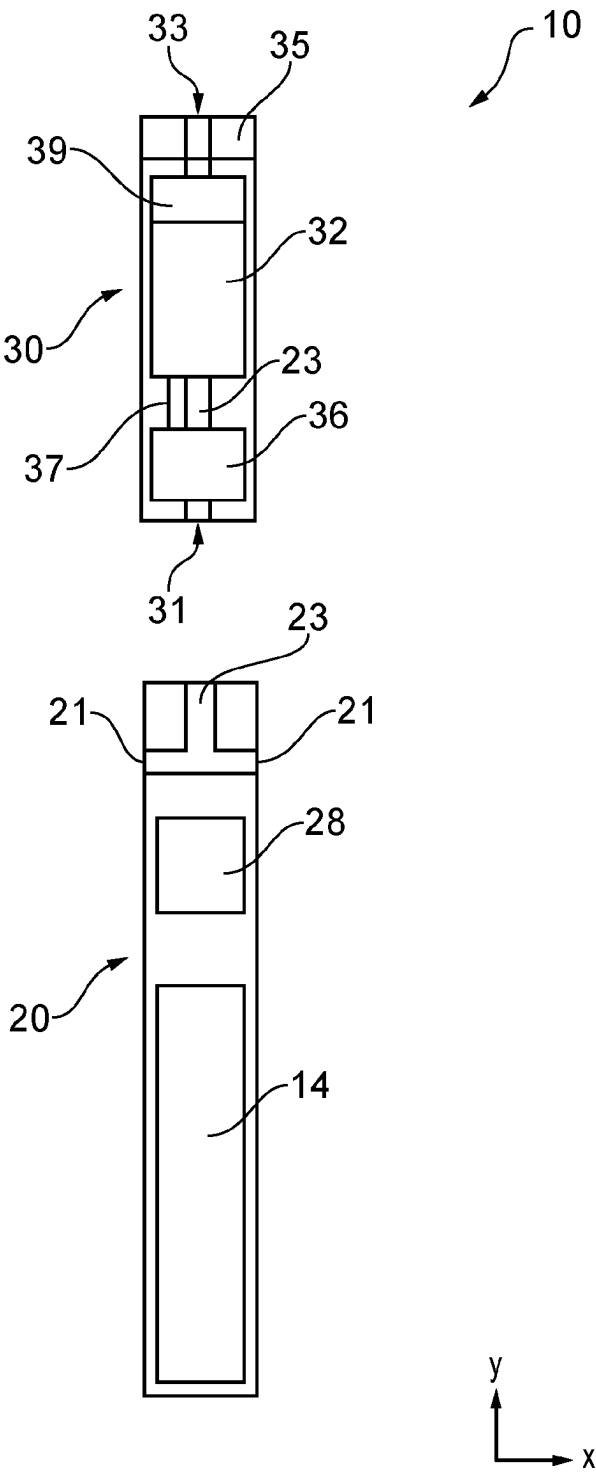


FIG. 1

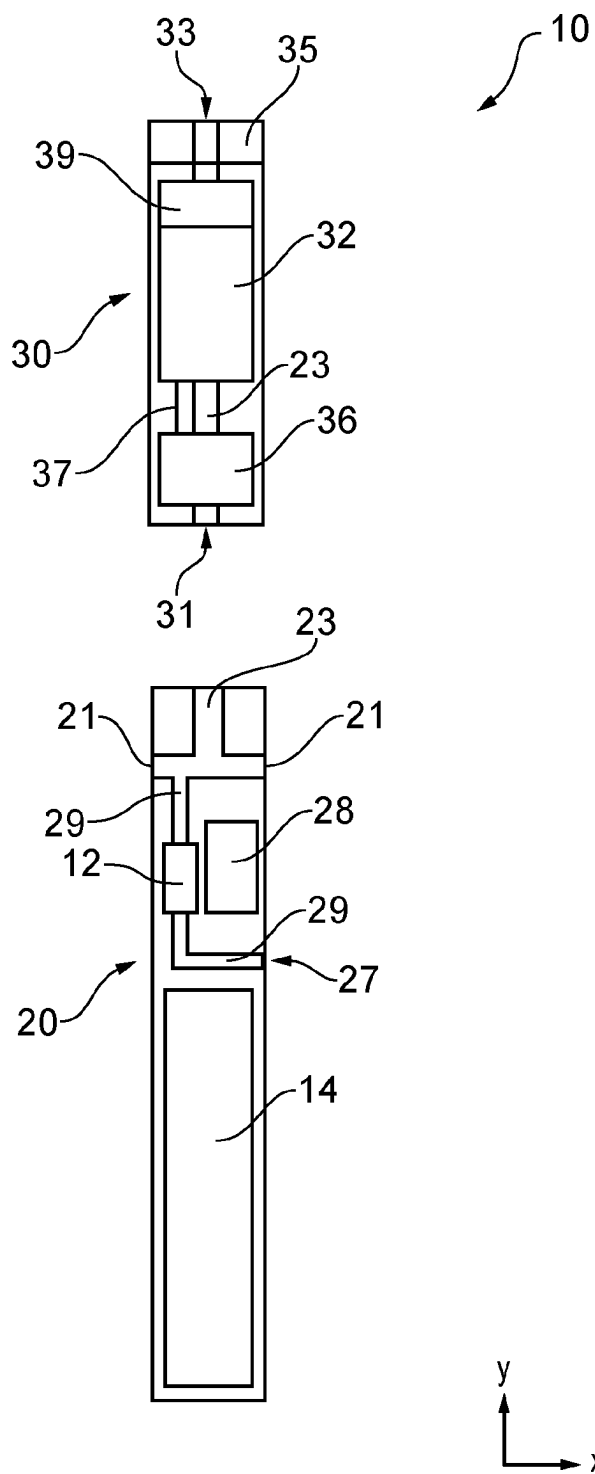


FIG. 2A

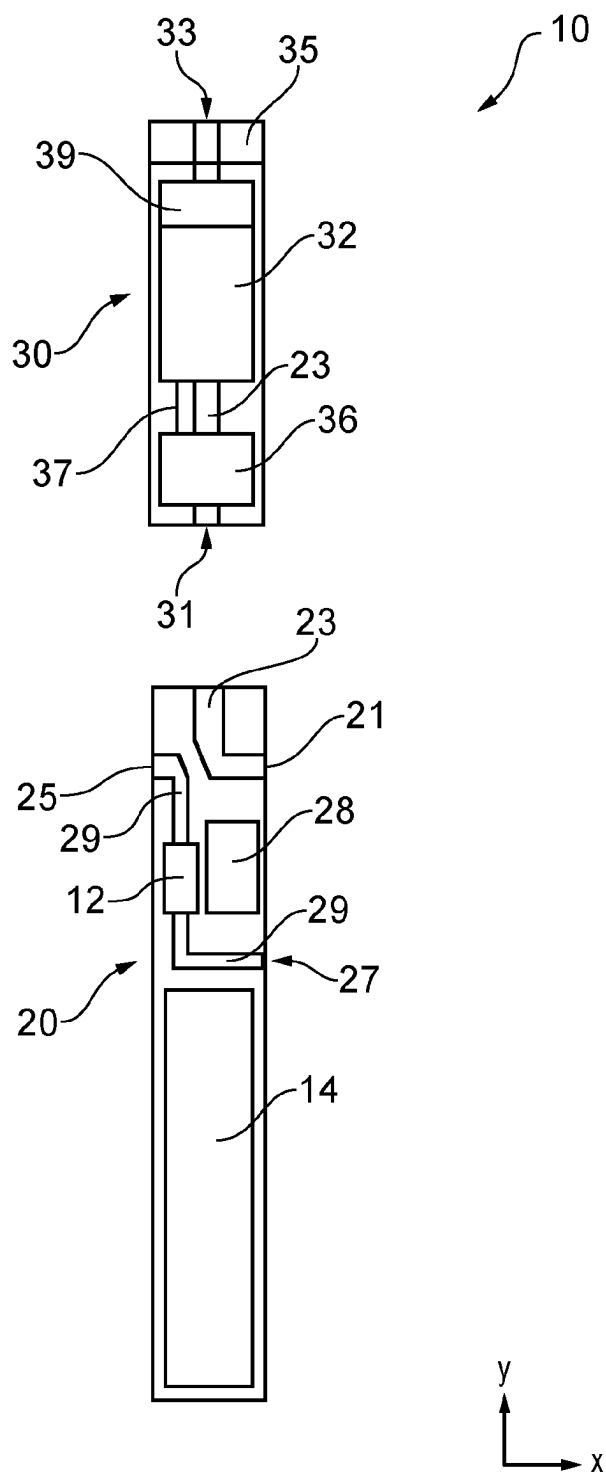


FIG. 2B

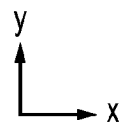
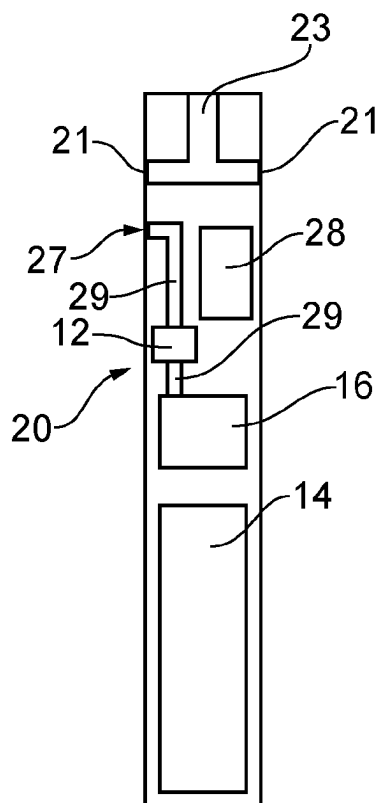
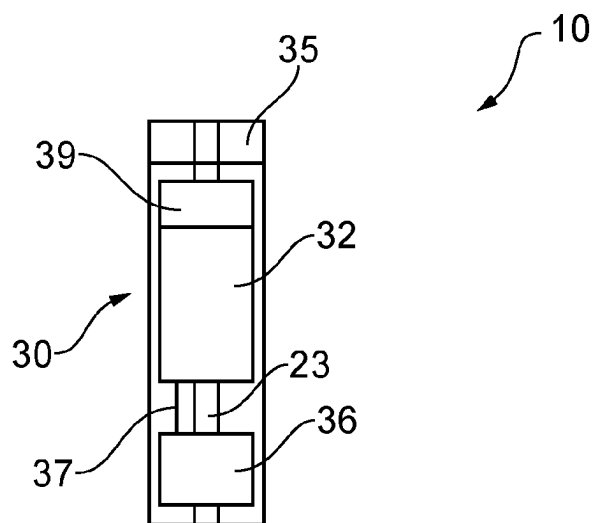


FIG. 2C

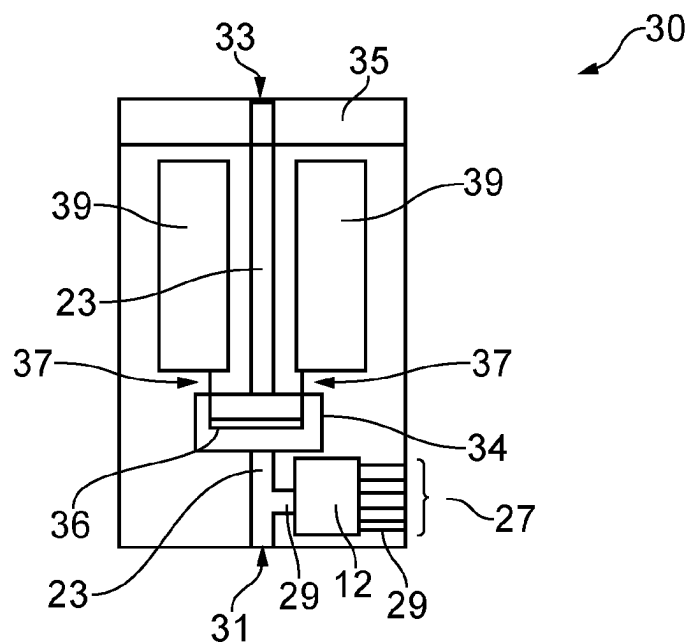


FIG. 3A

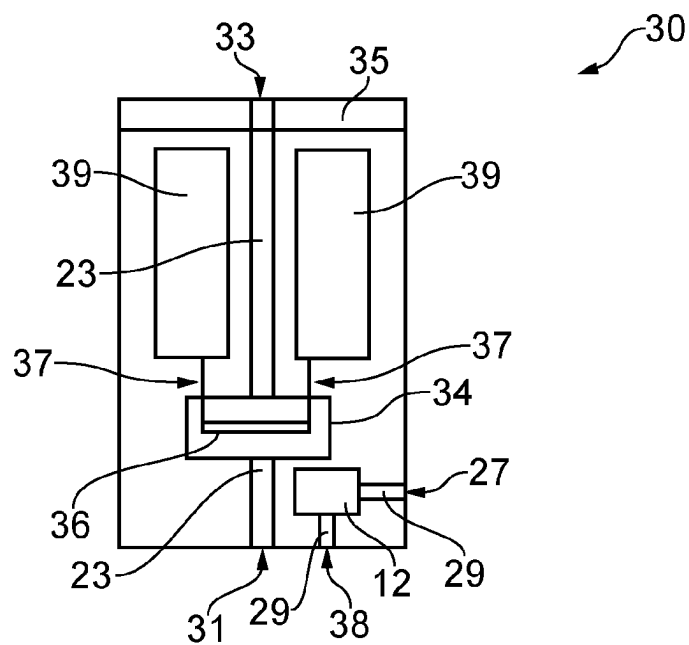
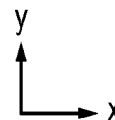


FIG. 3B



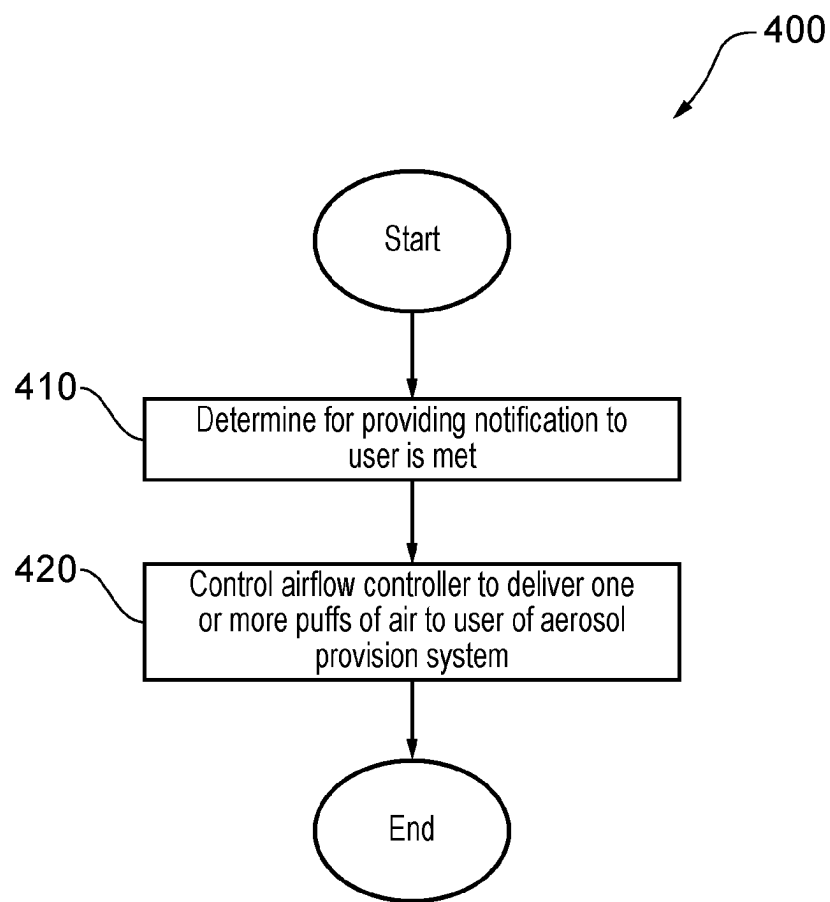


FIG. 4

AEROSOL PROVISION SYSTEM AND METHOD

TECHNICAL FIELD

[0001] The present invention relates to an aerosol provision system and method.

BACKGROUND

[0002] Electronic aerosol provision systems such as electronic cigarettes (e-cigarettes) generally contain an aerosol-generating material, such as a reservoir of a source liquid containing a formulation, typically including nicotine, or a solid material such as a tobacco-based product, from which an aerosol is generated for inhalation by a user, for example through heat vaporisation. Thus, an aerosol provision system will typically comprise an aerosol generator, e.g. a heating element, arranged to aerosolise a portion of aerosol-generating material to generate an aerosol in an aerosol generation region of an air channel through the aerosol provision system. As a user inhales on the device and electrical power is supplied to the aerosol generator, air is drawn into the device through one or more inlet holes and along the air channel to the aerosol generation region, where the air mixes with the vaporised aerosol generator and forms a condensation aerosol. The air drawn through the aerosol generation region continues along the air channel to a mouthpiece, carrying some of the aerosol with it, and out through the mouthpiece for inhalation by the user.

[0003] It is common for aerosol provision systems to comprise a modular assembly, often having two main functional parts, namely an aerosol provision device and an article. Typically, the article will comprise the article aerosol-generating material and the aerosol generator (heating element), while the aerosol provision device part will comprise longer-life items, such as a rechargeable battery, device control circuitry and user interface features. The aerosol provision device may also be referred to as a reusable part or battery section and the article may also be referred to as a consumable, disposable/replaceable part, cartridge or cartromiser.

[0004] The aerosol provision device and article are mechanically coupled together at an interface for use, for example using a screw thread, bayonet, latched or friction fit fixing. When the aerosol-generating material in an article has been exhausted, or the user wishes to switch to a different article having a different aerosol-generating material, the article may be removed from the aerosol provision device and a replacement article may be attached to the device in its place.

[0005] Haptic components or elements can form a part of the aerosol provision system and be used to provide a sensory input or sensation to the user. Haptic components typically take the form of an eccentric rotating mass (ERM), piezoelectric actuator or motor.

[0006] It can be difficult to use and control such haptic components to accurately convey information to the user compared to more conventional output devices, such as lights, microphone and display screen.

[0007] Various approaches are described herein which seek to help address or mitigate some of the issues discussed above.

SUMMARY

[0008] The disclosure is defined in the appended claims.

[0009] In accordance with some embodiments described herein, there is provided an aerosol provision system comprising a first air channel extending from an air inlet to a first outlet via an aerosol generation region, an aerosol generator for generating aerosol from an aerosol-generating material in the aerosol generation region, a second air channel extending at least in part from an airflow controller to a second outlet, and control circuitry configured to control the airflow controller to deliver one or more puffs of air to a user of the aerosol provision system via the second outlet in response to determining a condition for providing a notification to the user is met.

[0010] The airflow controller can be one or more of a pneumatic motor, an actuator for operating a valve and a fan. The airflow controller can comprise the actuator for operating the valve, and wherein the second air channel is in fluid communication with a pressurised container containing pressurised air sealed by the valve, wherein the control circuitry is configured to control the actuator to selectively operate the valve of the pressurised container to release pressurised air into the second air channel and to the user via the second outlet.

[0011] The second air channel can extend from the or another air inlet to a second outlet via the airflow controller.

[0012] The aerosol provision system can further comprise a housing, wherein the second outlet is located on a different surface of the housing to the first outlet.

[0013] The second outlet can be configured to direct the puffs of air in a different direction to aerosol delivered via the first outlet.

[0014] A number and/or direction of the puffs of air delivered can be based on the condition for providing the notification.

[0015] The aerosol provision system can further comprise one or more sensors, and wherein the control circuitry is configured to determine the condition is met based on signals received from the one or more sensors. One of the sensors can be configured to measure a state of charge of a power source of the aerosol generating system. One of the sensors can be configured to measure an operating characteristic of the aerosol generator. One of the sensors can be configured to measure an amount of airflow in the first air channel. One of the sensors can be configured to measure an orientation and/or movement of the aerosol provision system. One of the sensors can be configured to detect if the user is touching or in proximity to the aerosol provision system.

[0016] The control circuitry can be configured to determine the condition is met based on a signal received via a communications interface from an external device.

[0017] The aerosol provision system can further comprise an input device, and wherein control circuitry is configured to determine the condition is met based on an input received via the input device.

[0018] The second outlet can comprise a plurality of holes. The control circuitry can be configured to control the airflow controller to deliver one or more puffs of air via a first subset of the plurality of holes based on the condition for providing the notification. The control circuitry can be configured to control the airflow controller to deliver one or more puffs of air via a second subset of the plurality of holes after delivering the one or more puffs of air via the first subset of

the plurality of holes. At least one hole in the first subset of holes may not in the second subset of holes.

[0019] In accordance with some embodiments described herein, there is provided an article for an aerosol provision system comprising a first air channel extending from an air inlet to a first outlet via an aerosol generation region, an aerosol generator for generating aerosol from an aerosol-generating material in the aerosol generation region, a second air channel extending at least in part from an airflow controller to a second outlet, wherein the airflow controller is configured to deliver one or more puffs of air to a user of the aerosol provision system via the second outlet in response to a condition for providing a notification to the user being met.

[0020] In accordance with some embodiments described herein, there is provided an aerosol provision device for an aerosol provision system, the aerosol provision system comprising a first air channel extending from an air inlet to a first outlet via an aerosol generation region, an aerosol generator for generating aerosol from an aerosol-generating material in the aerosol generation region, and a second air channel extending at least in part from an airflow controller to a second outlet. The aerosol provision device comprises control circuitry configured to control the airflow controller to deliver one or more puffs of air to a user of the aerosol provision system via the second outlet in response to determining a condition for providing a notification to the user is met.

[0021] In accordance with some embodiments described herein, there is provided a method for operating an aerosol provision system comprising controlling an airflow controller to deliver one or more puffs of air to a user of an aerosol provision system in response to determining a condition for providing a notification to the user is met, the aerosol provision system comprising a first air channel extending from an air inlet to a first outlet via an aerosol generation region, an aerosol generator for generating aerosol from an aerosol-generating material in the aerosol generation region, and a second air channel extending at least in part from an airflow controller to a second outlet. The one or more puffs of air are delivered via the second outlet.

[0022] There is also provided a computer readable storage medium comprising instructions which, when executed by a processor, performs the above method.

[0023] These aspects and other aspects will be apparent from the following detailed description. In this regard, particular sections of the description are not to be read in isolation from other sections.

BRIEF DESCRIPTION OF DRAWINGS

[0024] Embodiments of the invention will now be described, by way of example only, with reference to accompanying drawings, in which:

[0025] FIG. 1 is a schematic diagram of an aerosol provision system;

[0026] FIGS. 2A, 2B and 2C are a schematic diagrams of an aerosol provision system;

[0027] FIGS. 3A and 3B are a schematic diagrams of an article for an aerosol provision system;

[0028] FIG. 4 is a flow diagram of a method for operating an aerosol provision system.

DETAILED DESCRIPTION

[0029] Aspects and features of certain examples and embodiments are discussed/described herein. Some aspects and features of certain examples and embodiments may be implemented conventionally and these are not discussed/described in detail in the interests of brevity. It will thus be appreciated that aspects and features of articles and systems discussed herein which are not described in detail may be implemented in accordance with any conventional techniques for implementing such aspects and features.

[0030] The present disclosure relates to aerosol provision systems, which may also be referred to as vapour provision systems, such as e-cigarettes. Throughout the following description the term “e-cigarette” or “electronic cigarette” may sometimes be used, but it will be appreciated this term may be used interchangeably with aerosol provision system and electronic aerosol provision system.

[0031] As noted above, aerosol provision systems (e-cigarettes) often comprise a modular assembly including both a reusable part (aerosol provision device) and a replaceable (disposable) or refillable cartridge part, referred to as an article. Systems conforming to this type of two-part modular configuration may generally be referred to as two-part systems or devices. It is also common for electronic cigarettes to have a generally elongate shape. For the sake of providing a concrete example, certain embodiments of the disclosure described herein comprise this kind of generally elongate two-part system employing refillable cartridges. However, it will be appreciated the underlying principles described herein may equally be adopted for other electronic cigarette configurations, for example modular systems comprising more than two parts, as devices conforming to other overall shapes, for up example based on so-called box-mod high performance devices that typically have a more boxy shape, or even systems comprising one part where the aerosol provision device and article are integrally formed with one another.

[0032] FIG. 1 is a highly schematic diagram (not to scale) of an example aerosol provision system 10, such as an e-cigarette, to which embodiments are applicable. The aerosol provision system 10 has a generally cylindrical shape, extending along a longitudinal or y axis as indicated by the axes (although aspects of the invention are applicable to e-cigarettes configured in other shapes and arrangements), and comprises two main components, namely an aerosol provision device 20 and an article 30.

[0033] The article 30 comprises or consists of aerosol-generating material 32, part or all of which is intended to be consumed during use by a user. An article 30 may comprise one or more other components, such as a reservoir (an aerosol-generating material storage area 39), an aerosol-generating material transfer component 37, an aerosol generation region, a housing, a wrapper, a mouthpiece 35, a filter and/or an aerosol-modifying agent.

[0034] An article 30 may also comprise an aerosol generator 36, such as a heating element, that emits heat to cause the aerosol-generating material 32 to generate aerosol in use. The aerosol generator 36 may, for example, comprise combustible material, a material heatable by electrical conduction, or a susceptor. It should be noted that it is possible for the aerosol generator 36 to be part of the aerosol provision device 20 and the article 30 then may comprise the reservoir (aerosol-generating material storage area 39) for the aerosol-generating material 32 such that, when the article 30 is

coupled with the aerosol provision device 20, the aerosol-generating material 32 can be transferred to the aerosol generator 36 in the aerosol provision device 20. It should be appreciated that the aerosol generator 36 may encompass an aerosol generator other than a heater. More generally, an aerosol generator is an apparatus configured to cause aerosol to be generated from the aerosol-generating material. In some other embodiments, the aerosol generator is configured to cause an aerosol to be generated from the aerosol-generating material without heating. For example, the aerosol generator may be configured to subject the aerosol-generating material to one or more of vibration, increased pressure, or electrostatic energy.

[0035] Aerosol-generating material 32 is a material that is capable of generating aerosol, for example when heated, irradiated or energized in any other way. The aerosol-generating material 32 may, for example, be in the form of a solid, liquid or gel which may or may not contain an active substance and/or flavourants. In some embodiments, the aerosol-generating material 32 may comprise an “amorphous solid”, which may alternatively be referred to as a “monolithic solid” (i.e. non-fibrous). In some embodiments, the amorphous solid may be a dried gel. The amorphous solid is a solid material that may retain some fluid, such as liquid, within it. In some embodiments, the aerosol-generating material 32 may for example comprise from about 50 wt %, 60 wt% or 70 wt % of amorphous solid, to about 90 wt %, 95 wt% or 100 wt % of amorphous solid.

[0036] The aerosol-generating material 32 comprises one or more ingredients, such as one or more active substances and/or flavourants, one or more aerosol-former materials, and optionally one or more other functional materials such as pH regulators, colouring agents, preservatives, binders, fillers, stabilizers, and/or antioxidants.

[0037] The active substance as used herein may be a physiologically active material, which is a material intended to achieve or enhance a physiological response. The active substance may for example be selected from nutraceuticals, nootropics, and psychoactives. The active substance may be naturally occurring or synthetically obtained. The active substance may comprise for example nicotine, caffeine, taurine, theine, vitamins such as B6 or B12 or C, melatonin, cannabinoids, or constituents, derivatives, or combinations thereof. The active substance may comprise one or more constituents, derivatives or extracts of tobacco, cannabis or another botanical.

[0038] In some embodiments, the active substance comprises nicotine. In some embodiments, the active substance comprises caffeine, melatonin or vitamin B12.

[0039] The aerosol provision device 20 includes a power source 14, such as a battery, configured to supply electrical power to the aerosol generator 36. The power source 14 in this example is rechargeable and may be of a conventional type, for example of the kind normally used in electronic cigarettes and other applications requiring provision of relatively high currents over relatively short periods. The power source 14 may be recharged through the charging port (not illustrated), which may, for example, comprise a USB connector.

[0040] The aerosol provision device 20 includes device control circuitry 28 configured to control the operation of the aerosol provision system 10 and provide conventional operating functions in line with the established techniques for controlling aerosol provision systems such as electronic

cigarettes. The device control circuitry (processor circuitry) 28 may be considered to logically comprise various sub-units/circuitry elements associated with different aspects of the electronic cigarette's operation. For example, depending on the functionality provided in different implementations, the (device) control circuitry 28 may comprise power source control circuitry for controlling the supply of electrical power from the power source 14 to the aerosol generator 36, user programming circuitry for establishing configuration settings (e.g. user-defined power settings) in response to user input, as well as other functional units/circuitry associated functionality in accordance with the principles described herein and conventional operating aspects of electronic cigarettes. It will be appreciated the functionality of the (device) control circuitry 28 can be provided in various different ways, for example using one or more suitably programmed programmable computer(s) and/or one or more suitably configured application-specific integrated circuit(s)/circuitry/chip(s)/chipset(s) configured to provide the desired functionality.

[0041] The aerosol provision device 20 has an interface configured to receive the article 30, thereby facilitating the coupling between the aerosol provision device 20 and the article 30. The interface is located on a surface of the aerosol provision device 20.

[0042] The housing of the article 30 has a surface configured to be received by the interface on the aerosol provision device 20 in order to facilitate coupling between the article 30 and the aerosol provision device 20. The surface of the article may be configured to be a size and/or shape that mirrors the size and/or shape of the interface in order to facilitate coupling between the aerosol provision device 20 and the article 30. For example, the interface may comprise a cavity, chamber or other space on the surface of the aerosol provision device 20. The surface of the article 30 can then be configured to be a size and shape that mirrors the size and shape of the cavity in order for the surface of the article 30 to be inserted into the cavity.

[0043] Although not illustrated, the interface of the aerosol provision device 20 and the surface of the article 30 may have complementary features to reversibly attach and mate the article 30 to the aerosol provision device 20, such as a screw thread, bayonet fitting, latched or friction fit fixing or other fastening means.

[0044] The interface also comprises one or more connectors, such as contact electrodes, connected via electrical wiring to the control circuitry 28 and the power source 14. The article 30 also comprises one or more connectors, such as contact electrodes, connected via electrical wiring to the aerosol generator 36. In use, the article 30 is received by the interface of the aerosol provision device 20, thereby coupling the aerosol provision device 20 and the article 30. This results in the connectors on the article 30 mating with the connectors on the aerosol provision device 20, thereby allowing electrical power and electrical current to be supplied from the power source 14 of the aerosol provision device 20 to the aerosol generator 36 of the article 30.

[0045] The housing of the article 30 has a surface configured to engage with an interface on the aerosol provision device 20 in order to facilitate coupling between the article 30 and the aerosol provision device 20. In other words, the aerosol provision device 20 is configured to receive the article 30, via the interface, and the surface of the article is

proximate to the interface on the aerosol provision device 20 when the article 20 is received by the interface.

[0046] The aerosol provision system 10 includes one or more air inlets 21, located on one or more of the aerosol provision device 20 and the article 30. In use, as a user inhales on the mouthpiece 35, air is drawn into the aerosol provision system 10 through the air inlets 21 and along an air channel 23 to the aerosol generator 36, where the air mixes with the vaporised aerosol-generating material 32 and forms a condensation aerosol. The air drawn through the aerosol generator 36 continues along the air channel 23 to a mouthpiece 35, carrying some of the aerosol with it, and out through the mouthpiece 35 through an outlet 33 for inhalation by the user.

[0047] By way of a concrete example, the article 30 comprises a housing (formed, e.g., from a plastics material), a reservoir (aerosol-generating material storage area 39) formed within the housing for containing the aerosol-generating material 32 (which in this example may be a liquid which may or may not contain nicotine), an aerosol-generating material transfer component 37 (which in this example is a wick formed of e.g., glass or cotton fibres, or a ceramic material configured to transport the aerosol-generating material 32 from the aerosol-generating material storage area 39 using capillary action), an aerosol generation region containing the aerosol generator 36, and a mouthpiece 35. Although not shown, a filter and/or aerosol modifying agent (such as a flavour imparting material) may be located in, or in proximity to, the mouthpiece 35. The aerosol generator 36 of this example comprises a heater element formed from an electrically resistive material (such as NiCr8020) spirally wrapped around the aerosol-generating material transfer component 37, and located in an air channel 23. The area around the heating element and wick combination is the aerosol-generating area of the article 30.

[0048] FIGS. 2A, 2B and 2C are schematic diagrams of another aerosol provision system 10, where the same reference signs have been used for like elements between the aerosol provision system 10 illustrated in FIG. 1 and the aerosol provision system 10 illustrated in FIGS. 2A, 2B and 2C. As per the aerosol provision system 10 illustrated in FIG. 1, the aerosol provision system 10 illustrated in FIGS. 2A, 2B and 2C comprise an aerosol provision device 20 and an article 30.

[0049] As described above with reference to FIG. 1, the aerosol provision system 10 illustrated in FIGS. 2A, 2B and 2C includes one or more air inlets 21, located on one or more of the aerosol provision device 20 and the article 30. A first air channel 23 extends from the air inlet 21 to a first outlet 33 via an aerosol generation region (not illustrated). In other words, air enters the first air channel 23 through the air inlet(s) 21, flows along the first air channel 23 to aerosol generation region, then continues along the first air channel 23 to the first outlet 33. It should be appreciated that the first air channel 23 may comprise a first part in the aerosol provision device 20 and a second part in the article 30. The aerosol generator 36 is located in the aerosol generation region such that aerosol is generated in the aerosol generation region by the aerosol generator 36 (for example by heating aerosol-generating material 32). The aerosol-generating material 32 may be provided to the aerosol generator 36 from the aerosol-generating material storage area 39 via the aerosol-generating material transfer component 37.

[0050] In other words, in use, as a user inhales on the mouthpiece 35, air is drawn into the aerosol provision system 10 through the air inlets 21 and along the first air channel 23 to the aerosol generator 36, where the air mixes with the vaporised aerosol-generating material 32 and forms a condensation aerosol. The air drawn through the aerosol generator 36 continues along the first air channel 23 to the first outlet 33, carrying some of the aerosol with it, and out through the first outlet 33 for inhalation by the user. As illustrated in FIGS. 2A, 2B and 2C, the first outlet 33 may be located on the mouthpiece 35 of the article 30 such that the first outlet 33 is located in the mouth of the user when the user inhales on the aerosol provision system 10.

[0051] The aerosol provision system 10 illustrated in FIGS. 2A, 2B and 2C also includes a second air channel 29. In each of FIGS. 2A, 2B and 2C, the second air channel 29 extends at least in part from an airflow controller 12 to a second outlet 27. In other words, in the second air channel 29 air flows from the airflow controller 12 to the second outlet 27.

[0052] In the aerosol provision systems 10 illustrated in FIGS. 2A and 2B, the second air channel extends from either the air inlet 21 or another air inlet 25 to a second outlet 27 via an airflow controller 12. In other words, air enters the second air channel 29 either through the same air inlet 21 as the first air channel 23 or through another, separate, air inlet 25. The air flows along the second air channel 29 to the airflow controller 12, then continues along the second air channel 29 to the second outlet 27. Hence, the second air channel 29 can be considered to have a first part of the second air channel 29 extending from the air inlet to the airflow controller 12 and a second part of the second air channel 29 extending from the airflow controller 12 to the second outlet 27.

[0053] FIG. 2A illustrates an aerosol provision system 10 where the air inlet 21 to the second air channel 29 is the same air inlet 21 as to the first air channel 23. As shown in FIG. 2A, air enters the air inlet 21 (two inlets are shown in FIG. 2A) then the first air channel 23 and second air channel 29 branch off such that air entering the air inlet 21 can flow along either the first air channel 23 or the second air channel 29. FIG. 2B illustrates an aerosol provision system 10 where the air inlet 21 to the first air channel 23 is separate from the air inlet 25 to the second air channel 29. In other words, the first air channel 23 extends from a first air inlet 21 to outlet a first outlet 33, and the second air channel 29 extends from a second air inlet 25 to a second outlet 27. In this case, the first air channel 23 and the second air channel 29 are separate, such that air cannot pass from the first air channel 23 to the second air channel 29 and vice versa. Although the second air inlet 25 is illustrated in FIG. 2B as a single air inlet, it will be appreciated that the second air channel 29 may have a plurality of air inlets, where one or more of the plurality of air inlets are separate from the first and channel 23. FIG. 2C illustrates an aerosol provision system 10 where second air channel 29 does not have an air inlet. Instead, the second air channel 29 is in fluid communication with a pressurised container 16. The pressurised container 16 contains pressurised air sealed by a valve. Air from the pressurised container 16 can flow to the second outlet 25 via the airflow controller 12 as described in more detail below. The pressurised container 16 may be configured to be removable from the aerosol provision system 10, for example to allow the pressurised container 16 to be replaced once all or

substantially all of the air in the pressurised container 16 has been depleted. For example, a panel, door or other opening in a housing of the aerosol provision system 10 may be provided to allow the user to access the pressurised container 16 so that it can be inserted into and removed from the aerosol provision system 10 as required. Although the first air channel 23 is illustrated in FIG. 2C as having two air inlets 21, it will be appreciated that the first air channel 23 may have a single air inlet or more than two air inlets.

[0054] It will be appreciated that in both the aerosol provision systems 10 illustrated in FIGS. 2A, 2B and 2C the first outlet 33 and the second outlet 27 are separate such that air (and vapour) exits the first air channel 23 via the first outlet 33 separately from the air exiting the second channel 29 by the second outlet 27. Equally, air flowing along the second air channel 29 does not pass through the aerosol generation region, and air flowing along the first air channel 23 does not pass through the airflow controller 12.

[0055] The airflow controller 12 is configured to deliver one or more puffs of air to a user of the aerosol provision system 10 via the second outlet 27. The airflow controller can be one or more of a pneumatic motor, an actuator for a valve, a fan or any suitable airflow device for controlling the flow of air along the second air channel 29 and out of the second outlet 27.

[0056] The airflow controller 12 can be operatively coupled to the power source 14 of the aerosol provision device 20 in order to receive electrical power, and the airflow controller 12 is operatively coupled to the control circuitry 28 such that the control circuitry 28 can be configured to control the airflow controller 12. In other words, the control circuitry 28 is configured to control the airflow controller to deliver one or more puffs of air to a user of the aerosol provision system 10 via the second outlet 27.

[0057] For example, where the airflow controller 12 is a pneumatic motor or fan, the control circuitry 28 can be configured to control the pneumatic motor or fan by selectively controlling the power supplied to the pneumatic motor or fan and/or by changing an amount or magnitude of power supplied to the pneumatic motor or fan. The pneumatic motor and fan can be located in the second air channel 29 such that operation of the pneumatic motor (i.e. rotation of the rotor) or fan (i.e. by rotation of the fan blades) causes air to be drawn into the pneumatic motor or fan and expelled out of the pneumatic motor or fan to the second outlet 27. The duration of the puff is determined by the length of time that the pneumatic motor or fan is operating, whilst the strength or intensity of the puff is determined by the rotational speed of the pneumatic motor or fan (which can be related to the amount of power delivered to the pneumatic motor or fan). As it will be appreciated, multiple puffs of air can be delivered to the user by selectively operating (e.g. supplying power to) the pneumatic motor or fan to cause the rotor to rotate and stop rotating respectively.

[0058] Equally, where the airflow controller 12 is an actuator for a valve, the control circuitry 28 is configured to control the actuator to selectively operate the valve to allow air to pass through the valve such that air can flow along the second air channel 29 to the second outlet 27. In other words, when the valve is closed, no air can pass through the valve and when the valve is open air can pass through the valve. The control circuitry 28 controls the actuator to operate the valve to selectively open and close the valve. The duration of the puff is determined by the length of time that

the valve is open. As it will be appreciated, multiple puffs of air can be delivered to the user by controlling the actuator to selectively operate (e.g. open and close) the valve).

[0059] As described above in relation to FIG. 2C, the second air channel 29 can be in fluid communication with a pressurised container 16. In this case, the airflow controller 12 comprises an actuator for operating the valve that seals the pressurised container 16. The control circuitry 28 is then configured to control the actuator to selectively operate the valve to release pressurised air into the second air channel 29 and to the user via the second outlet 27.

[0060] FIGS. 3A and 3B are schematic diagrams of articles 30 for aerosol provision systems 10, such as the aerosol provision systems 10 illustrated in FIGS. 1, 2A, 2B and 2C, where the same reference signs have been used for like elements between the articles illustrated in FIGS. 1, 2A, 2B and 2C and the articles illustrated in FIGS. 3A and 3B. As per the articles 30 illustrated in FIGS. 1, 2A, 2B and 2C, the articles 30 illustrated in FIGS. 3A and 3B each comprise a reservoir (aerosol-generating material storage area 39), an aerosol-generating material transfer component 37, an aerosol generator 36 and a mouthpiece 35. As set out above, the aerosol generator 36 is located in an aerosol generation region 34, such that aerosol is generated in the aerosol generation region 34 by the aerosol generator 36 heating (or otherwise aerosolising) the aerosol-generating material 32.

[0061] As described above with reference to FIGS. 2A and 2B, the article 30 illustrated in FIGS. 3A and 3B includes a first air channel 23 extending from an air inlet 31 to a first outlet 33 via the aerosol generation region 34, and a second air channel 29 extending from either the air inlet 21 or another air inlet 25 to a second outlet 27 via an airflow controller 12.

[0062] Like FIG. 2A, FIG. 3A illustrates an article 30 where the air inlet 31 to the second air channel 29 is the same air inlet 31 as to the first air channel 23. As shown in FIG. 3A, air enters the air inlet 31 then the first air channel 23 and second air channel 29 branch off such that air entering the air inlet 31 can flow along either the first air channel 23 or the second air channel 29. Like FIG. 2B, FIG. 3B illustrates an article 30 where the air inlet 31 to the first air channel 23 is separate from the air inlet 38 to the second air channel 29. In other words, the first air channel 23 extends from a first air inlet 31 to a first outlet 33, and the second air channel 29 extends from a second air inlet 38 to a second outlet 27. In this case, the first air channel 23 and the second air channel 29 are separate, such that air cannot pass from the first air channel 23 to the second air channel 29 and vice versa. Although the first air inlet 31 and the second air inlet 38 are illustrated in FIGS. 2B and 3B as single air inlets, it will be appreciated that the first air channel 23 may have a plurality of the air inlets and the second air channel 29 may have a plurality of air inlets, where one or more of the plurality of air inlets for the second air channel 29 are separate from the first air channel 23.

[0063] Although not illustrated, it will be appreciated that the pressurised container 16 described above with reference to FIG. 2C may be located in the article 30. In this case, the pressurised container 16, airflow controller (actuator for operating a valve) 12 and the second outlet 27 are each located in/on the article 30 such that the second air channel 29 is entirely located in the article 30. As described above with reference to FIG. 2C, the second air channel 29 then extends from the pressurised container 16 to the second

outlet 27 via the airflow controller 12. The operation of the airflow controller 12 and pressurised container 16 is then the same as described above with respect of FIG. 2C.

[0064] As described above with reference to FIGS. 2A, 2B and 2C, it will be appreciated that in both the articles 30 illustrated in FIGS. 3A and 3B, the first outlet 33 and the second outlet 27 are separate such that air (and vapour) exits the first air channel 23 via the first outlet 33 separately from the air exiting the second channel 29 by the second outlet 27. Equally, air flowing along the second air channel 29 does not pass through the aerosol generation region 34, and air flowing along the first air channel 23 does not pass through the airflow controller 12.

[0065] As described above, the aerosol provision system 10 can comprise a housing containing all the components of the aerosol provision system 10 described above. The air inlets 21, 25, 33, 38 and the outlets 33, 27 are located on surfaces of the housing such that air can pass from outside the housing into the first air channel 23 and the second air channel 29 via the air inlets 21, 25, 33, 38 and air can pass from the first air channel 23 and the second and channel 29 out of housing via the outlets 33, 27 as described above.

[0066] Although the first air inlet 33 and the second air inlet 38 are illustrated as being on the same surface as each other (the negative y-surface, or the surface that engages with the aerosol provision device 20), the first air inlet 33 and the second air inlet 38 may each be located on a different surface, such as one of the side surfaces of the article 30 or the first air inlet 33 and the second air inlet 38 may be located on different surfaces. Equally, the first air inlet 33 and the second air inlet 38 may be located on different portions of the aerosol provision system 10. For example, the first air inlet 33 may be located on the article 30 whilst the second air inlet 25 is located on the aerosol provision device 20. In this case, the first air channel 23 may be entirely located inside the article 30 whilst the second air channel 29 may be entirely located inside the aerosol provision device 20.

[0067] The second outlet 27 can be located on a different surface of the housing to the first outlet 33. For example, as illustrated in FIGS. 2A, 2B and 2C, the first outlet 33 can be located on a surface of the article 30, such as on the mouthpiece 35, whilst the second outlet 27 can be located on a surface of the aerosol provision device 20. Equally, as illustrated in FIGS. 3A and 3B, the first outlet 33 can be located on a first surface of the article 30, whilst the second outlet 27 can be located on a different surface of the article 30. In FIGS. 3A and 3B, the first outlet 33 is located on a top surface of the article 30 (i.e. a surface aligned along the x-axis), whilst the second outlet 27 is located on a side surface of the article 30 (i.e. surface aligned along the y-axis).

[0068] The second outlet 27 can also be configured to direct the puffs of air in a different direction to aerosol delivered via the first outlet 33. In other words, air exiting the second outlet 27 is directed in a different direction to aerosol exiting the first outlet 33. As described above, aerosol exits the first outlet 33 to be delivered into the mouth of the user, for example out of the mouthpiece 35. The second outlet 27 can be configured to direct the puffs of air in a different direction, for example such that the puffs of air are delivered to the hand of the user when the user is touching or otherwise holding the aerosol provision system 10. This can be achieved by the second outlet 27 being

located on a different surface of the housing of the aerosol provision system 10 as described above. Equally, this can also be achieved by the second outlet 27 being tilted, skewed or otherwise orientated in a different direction to the first outlet 33, such that air exits the second outlet 27 in a different direction to aerosol exiting the first outlet 33. For example, although the first outlet 33 and the second outlet 27 illustrated in FIGS. 2 and 3 are shown to be orientated perpendicular to the surface of the housing of the aerosol provision system 10 they are located on, this is not essential, and one or more of the first outlet 33 and the second outlet 27 can be orientated at a different angle to the surface of the housing of the aerosol provision system 10 they located on. For example, the first outlet 33 may be orientated perpendicular to the surface whilst the second outlet 27 is orientated at a 45° angle to the surface, or the first outlet 33 may be orientated at a -45° angle to the surface whilst the second outlet 27 is orientated at a 60° angle to the surface.

[0069] As illustrated in FIG. 3A, the second outlet 27 can comprise the plurality of holes. In other words, air exiting the second air channel 29 via the second outlet 27 can do so out of multiple holes. As described above, the second air channel 29 still extends from the air inlet 21, 31 or a second inlet 25, 38 to the airflow controller 12, and then from the airflow controller to the second outlet 27 such that none of the air exiting the plurality of holes has passed through the aerosol generation region 34, and all of the air exiting the plurality of holes has passed through the airflow controller 12. As illustrated in FIG. 3A, the airflow controller 12 may have a plurality of outlets such that separate flow paths are created between the airflow controller 12 and each of the plurality of holes. Alternatively, the second air channel 29 may exit the airflow controller 12 at a single outlet, then branch off to each of the plurality of holes. Although there are three holes illustrated in FIG. 3A, it will be appreciated that fewer holes may be provided, i.e. 2, or more holes provided, for example 5, 10, 20. Although described herein as holes, it will be appreciated that the plurality of holes may have any cross-sectional shape, and not be limited to just a circular cross-section. Equally, although FIG. 3A illustrates an article 30 with a single air inlet 31 and the second outlet 27 comprising a plurality of holes, it will be appreciated that this concept can be applied to the any of the other examples illustrated, such as those in FIG. 2A, 2B, 2C and 3B. For example, an aerosol provision system 10, such as the aerosol provision system 10 illustrated in FIG. 2B, can be provided with an aerosol provision device 20 comprising a first air inlet 21, a second air inlet 25 and the second outlet 27 comprising a plurality of holes.

[0070] The control circuitry 28 is configured to control the airflow controller 12 to deliver one or more puffs of air to a user of the aerosol provision system 10 via the second outlet 27 in response to determining a condition for providing a notification to the user is met. The condition for providing the notification to the user is defined such that the notification (i.e. the one or more puffs of air delivered from the second outlet 27) is detected or felt by the user and conveys the necessary message or information to the user. The condition for providing a notification to the user is met may be based on one or more criteria, such as whether an inhalation is currently taking place or about to take place, the duration and/or strength of the inhalation, time since the last inhalation, whether the user is touching or holding the aerosol provision system 10, whether the aerosol generator

36 is being supplied with electrical power, whether the aerosol provision system **10** is on or otherwise operational, the state of charge of the power source **14**, the temperature or an operating characteristic of the aerosol generator **36**, an orientation or movement of the aerosol provision system **10**.

[0071] For example, it will be appreciated that, in order for the notification (i.e. the one or more puffs of air delivered from the second outlet **27**) to be detected or felt by the user, the user must be close to or touching the aerosol provision system **10**. One of the criteria can therefore be that the user is touching or otherwise holding the aerosol provision system **10**.

[0072] If the notification (i.e. the one or more puffs of air delivered from the second outlet **27**) is delivered during an inhalation, it will be felt or detected by the user during the inhalation, and therefore the user will associate the notification with the inhalation, for example as feedback that the aerosol provision system **10** is generating aerosol/operating. Where the one of the criteria is the and/or strength of the inhalation, providing the notification in response to the inhalation has exceeded a particular duration or strength can inform the user, respectively, that they should stop inhaling, or reduce the strength of the inhalation. Equally, the user may associate a notification delivered when an inhalation is not occurring as related to a property of the aerosol provision system **10**, such as a state of charge of the battery or time since the last inhalation.

[0073] Since the airflow controller **12** requires electrical power from the power source **14** in order to deliver the one or more puffs of air, if the state of charge of the power source **14** is too low, there may not be sufficient charge available to operate the airflow controller **12**. One of the criteria can therefore be that the state of charge of the power source **14** is above a particular level, such as 5, 10 or 20%. Equally, one of the criteria can be that the state of charge of the power source **14** has reached a particular level, such as 5%. In this case, the notification delivered to the user can indicate that the power source **14** has a low state of charge and needs to be recharged.

[0074] The condition for providing a notification to the user may be met when all of the criteria are met, when at least a certain number of criteria are met, such as 1, half or 75%, or a given combination of criteria being met, such as the user touching/holding the aerosol provision system and the state of charge of the power source being above a particular level, for example 10%, or an inhalation currently taking place (e.g. the aerosol generator **36** being supplied with electrical power) and the duration of the inhalation being greater than a predetermined time, such as 5 or 10 seconds.

[0075] A number, duration and/or direction of the puffs of air delivered can be based on the condition for providing the notification. In other words, in response determining that the condition for providing the notification being met, the control circuitry **28** can be configured to control the airflow controller **12** to deliver a number of puffs of air and/or direct the one or more puffs of air in a particular direction. For example, three puffs of air can be delivered by the airflow controller **12** with a predetermined gap between each other there, such as one second. Equally, the puffs of air can be delivered at a 45° angle to the surface of the aerosol provision system **10** on which the second outlet **27** is located. For example, the second outlet **27** can comprise a movable nozzle or other flow director that can be actuated or

otherwise moved to control the direction that the puff of air is delivered out of the second outlet **27**.

[0076] The number and/or duration of the puffs of air delivered can be different for different conditions and/or criteria for providing a notification. For example, when a condition is the aerosol provision system **10** being turned on, a single puff of air may be delivered by the airflow controller **12**, whilst when the condition is an inhalation taking place, the duration of the puff of air correspond to the duration of the inhalation. In other words, air is delivered from the second outlet **27** by the airflow controller **12** continuously as an inhalation takes place. Equally, the number, duration and/or duration of the puffs of air delivered relate to or be indicative of the condition and/or criteria for providing the notification. For example, where the condition or criteria for providing the notification relates to the state of charge of the power source **14**, the number and/or duration of puffs may be indicative of the state of charge of the power source **14**, such as four puffs of air when the power source **14** is fully charged, three puffs of air when the power source is 75% charged, two puffs of air when the power source is 50% charged, one puff of air when the power source is 25% charged, and no puffs of air delivered when the power source has a low charge, for example less than 10%. Equally, a four second puff of air may be delivered when the power source **14** is fully charged, a three second puff of air delivered when the power source is 75% charged, a two second puff of air delivered when the power source is 50% charged, a one second puff of air delivered when the power source is 25% charged, and no puffs of air delivered (or plurality of puffs of air delivered, such as 4) when the power source has a low charge, for example less than 10%.

[0077] As described above with reference to FIG. 3A, the second outlet **27** can comprise a plurality of holes. The control circuitry **28** can be configured to control the airflow controller **12** to deliver one or more puffs of air via a first subset the plurality of holes based on the condition for providing an indication. In other words, in response to determining that the condition for providing the notification is met, the control circuitry **28** can be configured to control the airflow controller **12** to deliver one or more puffs of air via first subset of the polarity of holes such that puffs of air are not delivered from one or more holes that are not part of the first subset. In other words, the first subset of holes does not include all of the polarity of holes. For example, in the article **30** illustrated in FIG. 3A, the first subset of holes may correspond to one hole, such as the bottom hole (hole furthest from the mouthpiece along the y-axis), such that one or more puffs of air are only delivered from the bottom hole in response to the condition being met. Equally, the first subset of holes may correspond to the top and middle holes (the two holes closest to the mouthpiece along the y-axis).

[0078] The control circuitry **28** can be configured to control the airflow controller **12** to deliver one or more puffs of air via a second subset of the polarity of holes after delivering the one or more puffs of air via the first subset of the polarity of holes. In other words, one or more puffs of air are delivered via the first subset of holes, then one or more puffs of air are delivered via a second subset of holes. At least one hole in the first subset of holes may not be in the second subset of holes, such that the first subset of holes and the second subset of holes are a different combination of the polarity of holes.

[0079] The number of holes and the particular holes in the first and second subset of holes can be based on the condition for providing a notification. The number of holes and the particular holes in the first and second subset of holes can also be different for different conditions and/or criteria for providing a notification. For example, when a condition is the aerosol provision system 10 being turned on, the first subset of holes may correspond to a single hole, such that one or more puffs of air are delivered from a single hole in response to the aerosol provision system 10 being turned on, whilst when the condition is an inhalation taking place, the first subset of holes may correspond to a single hole, and the second subset of holes corresponds to two holes, such that one or more puffs of air are delivered from a single hole, then two holes as an inhalation takes place.

[0080] Equally, the number of holes and the particular holes in the first and second subset of holes can relate to or be indicative of the condition for providing the notification. For example, where the condition for providing notification relates to the state of charge of the power source 14, the first subset of holes may correspond to a single hole and the second subset of holes corresponds to two holes, and a puff of air delivered from the first subset of holes and then a puff of air delivered from the second subset of holes to indicate the power source 14 is fully charged, a puff of air delivered from the first subset of holes only (i.e. no air delivered from second subset of holes) when the power source is 50% charged, and no puffs of air delivered when the power source has a low charge, for example less than 10%.

[0081] The control circuitry 28 can be configured to determine the condition is met based on signals received from the one or more sensors. The aerosol provision system 10 illustrated in FIG. 1 also comprises one or more sensors 24. The one or more sensors 24 can be located on or within the aerosol provision device 20 and/or the article 30. The one or more sensors 24 can be operatively coupled to the power source 14 of the aerosol provision device 20 in order to receive electrical power, and the one or more sensors 24 can be operatively coupled to the control circuitry 28 such that the control circuitry 28 can be configured to control the one or more sensors 24. The control circuitry 28 is then configured to determine the condition is met based on signals received from the one or more sensors 24. In other words, the control circuit 28 is configured to read or otherwise receive readings from the one or more sensors 24, and use the readings to determine if the condition is met. The control circuitry 28 can receive readings from the sensors 24 periodically, for example every second, minute or five minutes, or the control circuitry 28 can send a request to the sensors 24 for the one or more readings. Equally, the control circuitry 28 can be configured to determine if the condition and/or one or more of the criteria are met in response to an event, for example one or more readings from the sensors 24 changing.

[0082] One of the sensors can be configured to measure a state of charge of the power source 14 of the aerosol generating system 10. For example, one of the sensors 24 can comprise a voltmeter and/or current sensor configured to measure, respectively, an amount of voltage and current for the power source 14 in order to determine the state of charge (i.e. the charge remaining) in the power source 14. In this case, the condition could relate to the state of charge of the power source 14. For example, the airflow controller may only be enabled when the state of charge of the power source

14 is above a certain level, such as 5, 10 or 20%. As it will be appreciated, the airflow controller requires electrical power from the power source 14 in order to deliver the one or more puffs of air. If the state of charge of the power source 14 is too low, there may not be sufficient charge available to operate the airflow controller.

[0083] One of the sensors 24 can be configured to measure an operating characteristic of the aerosol generator 36. For example, a thermocouple or other temperature sensor may be located on or proximate to the aerosol generator 36, for example inside the aerosol generation region 32. It will be appreciated that the temperature of the aerosol generator 36 and the temperature within the aerosol generation region 32 will increase during an inhalation, since electrical power is supplied to the aerosol generator 36 from the power source 14, whilst the temperature of the of the aerosol generator 36 and the temperature within the aerosol generation region 32 will be lower, for example substantially close to ambient temperature, when an inhalation is not occurring. Such changes in temperature can be measured or otherwise detected by the temperature sensor, such that the measurements or readings from the temperature sensor are indicative of whether an inhalation is currently taking place. The temperature sensor can be configured to measure the temperature of the aerosol generator 36 by measuring the surface temperature of the aerosol generator 36 or the air temperature proximate to the aerosol generator, such as the air temperature within the aerosol generation region 32. The operating characteristic of the aerosol generator 36 can also relate to the current or power supplied to the aerosol generator 36, an amount of airflow around or proximate to the aerosol generator 36, or any other suitable operating characteristic of the aerosol generator 36.

[0084] One of the sensors 24 can be configured to measure an amount of airflow in the first air channel 23. For example, a flow sensor or microphone may be located in or on a wall of the first air channel 23 and configured to measure or otherwise detect a flow of air within the first air channel 23. As it will be appreciated, the air flow in the first air channel 23 will increase when an inhalation is currently taking place (i.e. when the user inhales on the aerosol provision system 10). When an inhalation is not taking place (i.e. when the user is not inhaling on the aerosol provision system 10) the amount of airflow in the first air channel 23 may be low or substantially zero. Such changes in airflow can be measured or otherwise detected by the airflow sensor, such that the measurements or readings from the airflow sensor are indicative of whether an inhalation is currently taking place. The amount of airflow may relate to a property of the airflow, such as a mass flow or flow velocity, and therefore provide an indication as to the strength of an inhalation as well as whether an inhalation is currently taking place. Equally, the amount of airflow may be an indication as to whether there is any airflow, for example 0 for no airflow detected/measured and 1 for airflow detected/measured, and therefore only provide an indication as to whether an inhalation is currently taking place. In response to determining that an inhalation has started, the control circuitry 28 can be configured to start a timer in order to record to the duration of the inhalation. Equally, the control circuitry 28 can be configured to start another timer in response to determining that an inhalation has finished in order to record the time between inhalations.

[0085] One of the sensors 24 can be configured to detect if the user is touching or in proximity to the aerosol provision system 10. For example, one of the sensors 24 can comprise a capacitive sensor, pressure sensor or other form of touch sensor. Such a touch sensor can be located on the body of the aerosol provision system 10, for example on the aerosol provision device 20, in order to detect if the user is holding or otherwise touching the aerosol provision system 10 with their hand. In this case, the touch sensor can be located proximate to the second outlet 27, for example adjacent to the second outlet on the same surface of the housing of the aerosol provision system 10 as the second outlet 27. This therefore ensures that the one or more puffs of air delivered via the second outlet 27 will be felt by the user, since the user is holding the aerosol provision system 10 proximate to the second outlet 27. As described above, the aerosol provision system 10 can comprise a mouthpiece 35, and the one of the sensors 24 can be configured to detect if the user is touching the mouthpiece 35. For example, one of the sensors 24 a touch sensor located on the mouthpiece 35 and configured to detect if the user is touching the mouthpiece (e.g. with their lips or other part of their mouth). As it will be appreciated, the user touching the mouthpiece 35 can be indicative of the user about to start an inhalation on the aerosol provision system 10, since the user need to put the aerosol provision system 10 in their mouths before they start to inhale on the first outlet 33. There may be more than one touch sensor, for example a first touch sensor located on the mouthpiece and a second touch sensor located on a different surface of the aerosol provision system 10, such as on the aerosol provision device 20 and/or proximate to the second outlet 27.

[0086] One of the sensors 24 can be configured to measure an orientation and/or movement of the aerosol provision system 10. For example, one of the sensors 24 can comprise a gyroscope, such as the MEMS gyroscope or gyrometer, a 6 or 9 axis accelerometer, a MEMS accelerometer and/or an Inertial Measurement Unit (IMU). The orientation of the aerosol provision system 10 measured by the accelerometer can indicate whether the aerosol provision system 10 is located on a horizontal flat surface, or whether the aerosol provision system 10 is in a different orientation such as with the article 30 pointing substantially downwards. The accelerometer can also be configured to measure the motion of the aerosol provision system 10, and therefore detect whether the aerosol provision system 10 is stationary, moving at a constant velocity, or undergoing an acceleration or deceleration. The condition and/or a criteria for providing a notification to the user may relate to the orientation and/or motion of the aerosol provision system 10, for example if the aerosol provision system 10 is in a particular orientation (such as vertical or aligned with the y-axis in FIGS. 1 to 3, or horizontal or aligned with the x-axis in FIGS. 1 to 3) or undergoing an acceleration or a particular motion. The motion may correspond to a particular gesture or known motion of the aerosol provision system 10, for example a flicking motion or a rotation of the aerosol provision system 10 corresponding to the user moving the aerosol provision system 10 up to their lips to take an inhalation.

[0087] The aerosol provision system 10 can also comprise a communications interface, and the control circuitry 28 configured to communicate with one or more external devices, such as a computer, mobile phone or other electronic device, via the communications interface. The control

circuitry 28 can be configured to determine the condition is met based on signal received via the communications interface from an external device. In other words, the external device can send a signal to the aerosol provision system 10 via the communications interface, and in response to receiving the signal, the control circuit 28 determines whether the condition is met. For example, the signal may indicate that the airflow controller is to be enabled or disabled. Equally, the signal may relate to a change of the condition and/or one or more of the criteria for providing a notification to the user. This allows the airflow controller and the notifications to the user to be controlled without directly interacting the aerosol provision system 10.

[0088] The aerosol provision system 10 can also comprise an input device, such as a button, switch, or touchscreen display. The control circuitry can be configured to determine the condition is met based on an input received via the input device. In other words, the user can provide an input on the input device, and in response to receiving the input, the control circuit 28 determines whether the condition is met. For example, the input may indicate that the airflow controller is to be enabled or disabled. Equally, the input may relate to a change of the condition and/or one or more of the criteria for providing a notification to the user. In some cases, the condition for and/or criteria for providing a notification to the user may be whether an input has or is being provided on the input device. For example, the aerosol provision system 10 may require the user provide the input, such as pressing a button, moving a switch or pressing and holding a button and/or switch, in order for power to be supplied to the aerosol generator 36. One of the criteria for providing a notification to the user can therefore be that whether or not such an input has been or is currently being provided. This allows the airflow controller to be controlled by and/or in response to the user providing an input on the aerosol provision system 10.

[0089] FIG. 4 is a flow diagram of a method 400 for operating an aerosol provision system, such as aerosol provision system 10. The method begins at step 410, where it is determined that a condition for providing a notification to the user is met. At step 420, an airflow controller is controlled to deliver one or more puffs of air to a user of an aerosol provision system. The method then ends.

[0090] The method 400 illustrated in FIG. 4 may be stored as instructions on a computer readable storage medium, such that when the instructions are executed by a processor, the method described above is performed. The computer readable storage medium may be non-transitory. In other words, the method 400 illustrated in FIG. 4 may be computer implemented. The method 400 may be performed by the aerosol provision device 20, such as by the control circuitry 28.

[0091] As described above, the present disclosure relates to (but it not limited to) an aerosol provision system comprising a first air channel extending from an air inlet to a first outlet via an aerosol generation region, an aerosol generator for generating aerosol from aerosol-generating material in the aerosol generation region, a second air channel extending at least in part from an airflow controller to a second outlet, and control circuitry configured to control the airflow controller to deliver one or more puffs of air to a user of the aerosol provision system via the second outlet in response to determining a condition for providing a notification to the user is met.

[0092] Thus, there has been described an aerosol provision system and method.

[0093] The various embodiments described herein are presented only to assist in understanding and teaching the claimed features. These embodiments are provided as a representative sample of embodiments only, and are not exhaustive and/or exclusive. It is to be understood that advantages, embodiments, examples, functions, features, structures, and/or other aspects described herein are not to be considered limitations on the scope of the invention as defined by the claims or limitations on equivalents to the claims, and that other embodiments may be utilised and modifications may be made without departing from the scope of the claimed invention. Various embodiments of the invention may suitably comprise, consist of, or consist essentially of, appropriate combinations of the disclosed elements, components, features, parts, steps, means, etc., other than those specifically described herein. In addition, this disclosure may include other inventions not presently claimed, but which may be claimed in future.

1. An aerosol provision system comprising:
 - a first air channel extending from an air inlet to a first outlet via an aerosol generation region;
 - an aerosol generator for generating aerosol from an aerosol-generating material in the aerosol generation region;
 - a second air channel extending at least in part from an airflow controller to a second outlet; and
 - control circuitry configured to control the airflow controller to deliver one or more puffs of air to a user of the aerosol provision system via the second outlet in response to determining a condition for providing a notification to the user is met.
2. The aerosol provision system of claim 1, wherein the airflow controller is one or more of a pneumatic motor, an actuator for operating a valve and a fan, and wherein the airflow controller comprises the actuator for operating the valve, and wherein the second air channel is in fluid communication with a pressurised container containing pressurised air sealed by the valve, wherein the control circuitry is configured to control the actuator to selectively operate the valve to release pressurised air into the second air channel and to the user via the second outlet.
3. (canceled)
4. The aerosol provision system of claim 1, wherein the second air channel extends from the or another air inlet to a second outlet via the airflow controller.
5. The aerosol provision system of claim 1, further comprising a housing, wherein the second outlet is located on a different surface of the housing to the first outlet.
6. The aerosol provision system of claim 1, wherein the second outlet is configured to direct the puffs of air in a different direction to aerosol delivered via the first outlet.
7. The aerosol provision system of claim 1, wherein a number and/or direction of the puffs of air delivered is based on the condition for providing the notification.
8. The aerosol provision system of claim 1, further comprising one or more sensors, and wherein the control circuitry is configured to determine the condition is met based on signals received from the one or more sensors.
9. The aerosol provision system of claim 8, wherein one of the sensors is configured to measure a state of charge of a power source of the aerosol generating system.

10. The aerosol provision system of claim 8 or claim 9, wherein one of the sensors is configured to measure an operating characteristic of the aerosol generator.

11. The aerosol provision system of claim 8, wherein one of the sensors is configured to measure an amount of airflow in the first air channel.

12. The aerosol provision system of claim 8 11, wherein one of the sensors is configured to measure an orientation and/or movement of the aerosol provision system.

13. The aerosol provision system of claim 8, wherein one of the sensors is configured to detect if the user is touching or in proximity to the aerosol provision system.

14. The aerosol provision system of claim 1, wherein the control circuitry is configured to determine the condition is met based on a signal received via a communications interface from an external device.

15. The aerosol provision system of claim 1, further comprising an input device, and wherein control circuitry is configured to determine the condition is met based on an input received via the input device.

16. The aerosol provision system of claim 1, wherein the second outlet comprises a plurality of holes.

17. The aerosol provision system of claim 16, wherein the control circuitry is configured to control the airflow controller to deliver one or more puffs of air via a first subset of the plurality of holes based on the condition for providing the notification.

18. The aerosol provision system of claim 17, wherein the control circuitry is configured to control the airflow controller to deliver one or more puffs of air via a second subset of the plurality of holes after delivering the one or more puffs of air via the first subset of the plurality of holes.

19. The aerosol provision system of claim 18, wherein at least one hole in the first subset of holes is not in the second subset of holes.

20. An article for an aerosol provision system comprising:

- a first air channel extending from an air inlet to a first outlet via an aerosol generation region;
- an aerosol generator for generating aerosol from an aerosol-generating material in the aerosol generation region;

a second air channel extending from an airflow controller to a second outlet, wherein the airflow controller is configured to deliver one or more puffs of air to a user of the aerosol provision system via the second outlet in response to a condition for providing a notification to the user being met.

21. (canceled)

22. A method for operating an aerosol provision system comprising:

controlling an airflow controller to deliver one or more puffs of air to a user of an aerosol provision system in response to determining a condition for providing a notification to the user is met, the aerosol provision system comprising a first air channel extending from an air inlet to a first outlet via an aerosol generation region, an aerosol generator for generating aerosol from an aerosol-generating material in the aerosol generation region, and a second air channel extending at least in part from an airflow controller to a second outlet, wherein the one or more puffs of air are delivered via the second outlet.

23. (canceled)

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