An electronic cigarette having multiple ports within a filter portion of the electronic cigarette. The ports may be elongated slits or small circular holes positioned proximate a center point of the filter portion or positioned proximate an outer perimeter of the filter portion of the electronic cigarette. The plurality of ports helps to diffuse and volumize the vapor inhaled by the user from within the body of the electronic cigarette.
ELECTRONIC CIGARETTE HAVING MULTIPLE PORTS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to U.S. Provisional Application Serial No. 61/827,455 titled ELECTRONIC CIGARETTE HAVING MULTIPLE PORTS, which was filed by Mark Scatterday on May 24, 2013. This application is also a continuation-in-part of U.S. patent application Ser. No. 29/455,721 titled ORNAMENTAL DESIGN FOR AN ELECTRONIC CIGARETTE HAVING MULTIPLE PORTS, which was filed by Mark Scatterday on May 23, 2013 and to which priority is claimed.

TECHNICAL FIELD

[0002] This provisional disclosure generally relates to alternative smoking devices, and more particularly, to an electronic cigarette.

SUMMARY

[0003] This summary is provided to introduce a selection of concepts in a simplified form that are further described below in the DESCRIPTION OF THE DISCLOSURE. This summary is not intended to identify key features of the claimed subject matter, nor is it intended to be used as an aid in determining the scope of the claimed subject matter.

[0004] In accordance with aspects of the present disclosure, a configuration of an electronic cigarette is presented. The disclosure presents an electronic cigarette having multiple ports.

[0005] In accordance with one embodiment of the present disclosure, an electronic cigarette is presented. The electronic cigarette comprises: an electronic cigarette having: a body containing internal components of the electronic cigarette; a filter portion coupled to a proximal end of the body; an end piece coupled to a distal end of the body; and a plurality of ports defined by the filter portion.

[0006] In accordance with another embodiment of the present disclosure, an electronic cigarette is presented. The electronic cigarette comprises: a body containing internal components of the electronic cigarette; a filter portion coupled to a proximal end of the body; an end piece coupled to a distal end of the body; and a plurality of ports defined by the filter portion; wherein the plurality of ports together form a circular pattern on the filter portion.

[0007] In accordance with another embodiment of the present disclosure, an electronic cigarette is presented. The electronic cigarette comprises: a body containing internal components of the electronic cigarette; a filter portion coupled to a proximal end of the body; an end piece coupled to a distal end of the body; and a plurality of ports defined by the filter portion; wherein the plurality of ports are adapted to diffuse and volumize vapor inhaled from the body of the electronic cigarette.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] In the descriptions that follow, like parts are marked throughout the specification and drawings with the same numerals, respectively. The drawing figures are not necessarily drawn to scale and certain figures can be shown in exaggerated or generalized form in the interest of clarity and conciseness. The disclosure itself, however, as well as a preferred mode of use, further objectives and advantages thereof, will be best understood by reference to the following detailed description of illustrative embodiments when read in conjunction with the accompanying drawings, wherein:

[0009] FIG. 1 is a perspective view of an electronic cigarette having multiple ports in accordance with one or more embodiments of the present invention. The electronic cigarette is shown having three elongated ports within the filter portion;

[0010] FIG. 2 is a right side view of the electronic cigarette having multiple ports of FIG. 1;

[0011] FIG. 3 is a left side view of the electronic cigarette having multiple ports of FIG. 1;

[0012] FIG. 4 is a bottom view of the electronic cigarette having multiple ports of FIG. 1, showing an end piece of the electronic cigarette for simulating the ash tip of a traditional cigarette;

[0013] FIG. 5 is a top view of the electronic cigarette having multiple ports of FIG. 1;

[0014] FIG. 6 is a perspective view of an electronic cigarette having multiple ports in accordance with one or more embodiments of the present invention. The electronic cigarette is shown having a plurality of small ports within the filter portion;

[0015] FIG. 7 is a perspective view of an electronic cigarette having multiple ports in accordance with one or more embodiments of the present invention. The electronic cigarette is shown having three elongated ports within the filter portion that are positioned close to an outer perimeter of the filter;

[0016] FIG. 8 is a top view of the electronic cigarette having multiple ports of FIG. 7; and

[0017] FIG. 9 is a perspective view of an electronic cigarette having multiple ports in accordance with one or more embodiments of the present invention. The electronic cigarette is shown having a plurality of small ports within the filter portion that are positioned close to an outer perimeter of the filter.

DESCRIPTION OF THE DISCLOSURE

[0018] The description set forth below in connection with the appended drawings is intended as a description of presently preferred embodiments of the disclosure and is not intended to represent the only forms in which the present disclosure can be constructed and/or utilized. The description sets forth the functions and the sequence of steps for constructing and operating the disclosure in connection with the illustrated embodiments. It is to be understood, however, that the same or equivalent functions and sequences can be accomplished by different embodiments that are also intended to be encompassed within the spirit and scope of this disclosure.

[0019] Prior art electronic cigarettes can include a number of components consisting of a power source such as a battery, vaporizing unit, and a unit containing liquid that contains nicotine. The battery can be a pre-charged, disposable type of device that is not rechargeable or, alternatively, a rechargeable battery. Upon inhalation, negative pressure causes a sensor to activate the vaporizing unit, which then causes the liquid to vaporize, permitting it to be inhaled through an end of the electronic cigarette. When used, the tip of the device can light up simulating the effects of a traditional cigarette. It
should be clearly understood that substantial benefit may be derived from the use of alternative configurations of the internal components.

Referring to FIGS. 1-9, an electronic cigarette 10 having multiple ports 16 is shown. The electronic cigarette 10 may comprise a body/conduit 18, internal components of the electronic cigarette 10 (e.g., the vaporizer, battery, liquid source, integrated circuit, and light source) that are positioned within the body 18, and an end piece 14. The internal components may have an outside diameter slightly less than an inside diameter of the body 18 which would allow the internal components to be held in place by the friction that is created between the outer surface of the internal components and the inner surface of the body 18. For example, if the body 18 has an inside diameter of about 6 mm, then the outside diameter of the internal components would be slightly less than 6 mm. The ports 16 together act as a diffuser; i.e., instead of having a user receive a concentration of vapor at one point (as the user would with a typical electronic cigarette), the ports 16 diffuse and volumize the vapor. FIGS. 1-4 show an electronic cigarette 10 having a body 18, a filter portion 12 at a proximal end of the body 18, and having an end piece 14 at a distal end of the body 18. Preferably, the end piece 14 is configured to simulate the ash tip of a traditional cigarette. Furthermore, the body 18 of the electronic cigarette 10 is also preferably configured to simulate the tobacco paper and filter of a traditional cigarette.

As shown, the ports 16 are defined by the filter portion 12 and allow vapor to pass from the inside of the body 18 of the electronic cigarette 10, through the ports 16 and out into the user’s mouth. As shown in the figures, the ports 16 together may form a circular pattern on the filter portion 12. In accordance with one embodiment of the present invention, the filter 12 of the electronic cigarette 10 may have a plurality of ports 16a (referred to generically as ports 16) that are elongated slits (see FIGS. 1, 5, 7 and 8). The ports 16a may be equally spaced apart. Although the ports 16a are shown as being slightly curved, it should be clearly understood that substantial benefit may be derived from the ports 16a having a substantially straight configuration. In one embodiment for example, where the filter portion 12 may have a diameter of approximately 8.0 mm, the ports 16a may be approximately 2.0 in length; although it should also be clearly understood that the ports 16a may be shorter or longer in length. In one embodiment, the ports 16a may have a width of approximately 0.50 mm; however, it should be clearly understood that the ports 16a may be wider or narrower. And the ports 16a may each be positioned approximately 2.0 mm from the center point of the filter portion 12; although it should be clear that substantial benefit may be derived from the ports 16a being positioned closer or further away from the center point of the filter portion 12. Furthermore, it should also be clearly understood that although the electronic cigarette 10 is shown as having three ports 16a, substantial benefit may be derived from any number of ports 16a. Ideally, the ports 16a may be appropriately sized so that they are less visible when the filter portion 12 of the electronic cigarette 10 is viewed from a distance or viewed at an angle, thereby allowing the electronic cigarette 10 to look more like a traditional cigarette.

In accordance with another embodiment of the present invention, the filter 12 of the electronic cigarette 10 may have ports 16b (referred to generically as ports 16) comprising a plurality of small circular holes (see FIGS. 6 and 9).

The ports 16 may be positioned close to a center point of the filter 12 (see FIGS. 1-6) or, in the alternative, the ports 16 may be positioned close to a perimeter of the filter 12 (see FIGS. 7-9). The closer the ports 16 are to the perimeter of the filter 12, the wider dispersion of vapor results. The foregoing description is provided to enable any person skilled in the relevant art to practice the various embodiments described herein. Various modifications to these embodiments will be readily apparent to those skilled in the relevant art, and generic principles defined herein can be applied to other embodiments. All structural and functional equivalents to the elements of the various embodiments described throughout this disclosure that are known or later come to be known to those of ordinary skill in the relevant art are expressly incorporated herein by reference and intended to be encompassed by the claims. Moreover, nothing disclosed herein is intended to be dedicated to the public.

What is claimed is:

1. An electronic cigarette having:
   a body containing internal components of the electronic cigarette;
   a filter portion coupled to a proximal end of the body;
   an end piece coupled to a distal end of the body; and
   a plurality of ports defined by the filter portion.

2. The electronic cigarette of claim 1 wherein the plurality of ports together form a circular pattern on the filter portion.

3. The electronic cigarette of claim 1 wherein the plurality of ports are equally spaced apart.

4. The electronic cigarette of claim 1 wherein the plurality of ports are positioned proximate to an outer perimeter of the filter portion.

5. The electronic cigarette of claim 1 wherein the plurality of ports are proximate to a center point of the filter portion.

6. The electronic cigarette of claim 1 wherein the plurality of ports further comprises a plurality of elongated slits.

7. The electronic cigarette of claim 6 wherein the elongated slits are curved.

8. The electronic cigarette of claim 1 wherein the plurality of ports further comprises a plurality of small circular holes.

9. An electronic cigarette having:
   a body containing internal components of the electronic cigarette;
   a filter portion coupled to a proximal end of the body;
   an end piece coupled to a distal end of the body; and
   a plurality of ports defined by the filter portion;
   wherein the plurality of ports together form a circular pattern on the filter portion.

10. The electronic cigarette of claim 9 wherein the plurality of ports are positioned proximate to an outer perimeter of the filter portion.

11. The electronic cigarette of claim 9 wherein the plurality of ports are proximate to a center point of the filter portion.

12. The electronic cigarette of claim 9 wherein the plurality of ports further comprises a plurality of curved elongated slits.

13. The electronic cigarette of claim 9 wherein the plurality of ports further comprises a plurality of small circular holes.

14. An electronic cigarette having:
   a body containing internal components of the electronic cigarette;
   a filter portion coupled to a proximal end of the body;
   an end piece coupled to a distal end of the body; and
a plurality of ports defined by the filter portion; wherein the plurality of ports are adapted to diffuse and volumize vapor inhaled from the body of the electronic cigarette.

15. The electronic cigarette of claim 14 wherein the plurality of ports are configured to be less visible when the filter portion of the electronic cigarette is viewed at an angle.

16. The electronic cigarette of claim 14 wherein the plurality of ports further comprises three curved elongated slits positioned proximate to a center point of the filter portion.

17. The electronic cigarette of claim 16 wherein the elongated slits are positioned approximately 2.00 mm from the center point of the filter portion.

18. The electronic cigarette of claim 17 wherein the elongated slits have a width of approximately 0.50 mm, the elongated slits have a length of approximately 2.0 mm, and wherein the filter portion of the electronic cigarette has a diameter of approximately 8.0 mm.

19. The electronic cigarette of claim 14 wherein the plurality of ports further comprises three curved elongated slits positioned proximate to an outer perimeter of the filter portion.

20. The electronic cigarette of claim 14 wherein the plurality of ports further comprises a plurality of small circular holes positioned proximate to an outer perimeter of the filter portion.