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[12] Specification of Utility Model Patent

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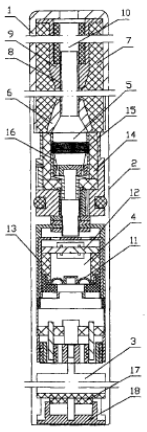
1 page of Claims 3 pages of Specifications
2 pages of Attached Drawings

[54] Title Utility Model

Electronic Cigarette

[57] Abstract

Disclosed is an electronic cigarette, which mainly solves the technical problems of complex electronic cigarette structure and circuit and high manufacturing cost, and adopts the proposal that an oil conservator is nested in a sucker, the center of the oil conservator is nested with a gas pipe, the gas pipe is connected with a gas pipe support, the gas pipe and the gas pipe support form a smoking channel with the center of the sucker being separated and closed from the oil conservator, and the other end of the gas pipe is communicated with a nicotine oil fuming device, a fuming device control switch includes a silicon



film-coated tablet and a switch circuit board controlled by a Hall element and a field-effect tube, the silicon film-coated tablet is arranged in the support, the silicon film-coated tablet makes one end of the support form a sealing structure, and the other end of the support is communicated with the smoking channel on the sucker. The utility model has advantages of simple structure, low manufacturing cost, convenient use and having the same effect with the tobacco taking, and the nicotine oil smoke contains no nicotine that is harm to the human body, thereby overcoming the influence of tobacco taking to the human health.

1. An electronic cigarette, comprising: a sucker, a cigarette rod shell, a battery, a nicotine oil fuming device and a fuming device control switch, characterized in that:

A, the sucker (1) is connected with the cigarette rod shell (2), and the battery (3), the fuming device control switch (4) and the nicotine oil fuming device (5) are sequentially nested in the cigarette rod shell (2);

B, an oil conservator (7) is nested in the sucker (1), a gas pipe (8) is nested in the center of the oil conservator (7), the gas pipe (8) is connected with a gas pipe support (9), the gas pipe (8) and the gas pipe support (9) form a smoking channel (10) with the center of the sucker (1) being separated and closed from the oil conservator (7), and the other end of the gas pipe (8) is communicated with the nicotine oil fuming device (5);

C, the fuming device control switch (4) comprises a silicon film-coated tablet (11) and a switch circuit board (12) controlled by a Hall element and a field-effect tube, the silicon film-coated tablet (11) is mounted in a support (13), the silicon film-coated tablet (11) makes one end of the support (13) form a sealing structure, and the other end of the support (13) communicated with the smoking channel (10) on the sucker (1);

D, the nicotine oil fuming device (5) comprises an oil storage device (14), a temporary oil storage device (15) composed of a set of capillary tubes and an electric heating film wire (16), the oil storage device (14) is in contact with the temporary oil storage device (15) and the oil conservator (7) in the sucker (1), respectively, and the electric heating film wire (16) is electrically connected with the battery (3) through the fuming device control switch (4).

2. The electronic cigarette according to Claim 1, characterized in that a luminous display panel (17) is disposed in one end of the cigarette rod shell (2), the luminous display panel (17) is fixed at one end of the cigarette rod shell (2) via a lamp cover (18), and the luminous display panel (17) is electrically connected with the battery (3) via the fuming device control switch (4).

3. The electronic cigarette according to Claim 1 or 2, characterized in that a waterproof sleeve (6) with a bell mouth is disposed on a communicating end of the gas pipe (8) with the nicotine oil fuming device (5).

Electronic Cigarette

Technical Field

The utility model relates to a novel electronic cigarette, in particular to an electronic cigarette in which an air pressure difference controls a switching circuit to control a nicotine oil fuming device, and nicotine oil is fumed by the nicotine oil fuming device to produce nicotine oil smoke.

Background Art

Smoking is a serious threat to human health. There are many smokers in China. In order to make smokers quit smoking, there are many methods to quit smoking in the prior art, for example, various drugs are used to quit smoking. With the development of electronic technologies, electronic cigarettes fume nicotine oil through a nicotine oil fuming device to produce nicotine oil smoke to replace tobacco smoking by people, but existing electronic cigarettes are high in manufacturing cost, complex in circuit and inconvenient to use.

Objectives of the Invention

In order to overcome the technical deficiencies in the prior art, such as complex structures and circuits and high manufacturing costs, the utility model designs an electronic cigarette which is low in manufacturing cost and convenient to use, and produces the same effect as tobacco smoking. The electronic cigarette adopts an air pressure difference to control a switching circuit, the switching circuit controls a nicotine oil fuming device, and nicotine oil is fumed by the nicotine oil fuming device to produce nicotine oil smoke for a smoker to smoke.

A technical solution adopted by the utility model to achieve the objectives of the invention is that an electronic cigarette comprises: a sucker, a cigarette rod shell, a battery, a nicotine oil fuming device and a fuming device control switch, the sucker is connected with the cigarette rod shell, and the battery, the fuming device control switch and the nicotine oil fuming device are sequentially nested in the cigarette rod shell.

An oil conservator is nested in the sucker, a gas pipe is nested in the center of the oil conservator, the gas pipe is connected with a gas pipe support, the gas pipe and the gas pipe support form a smoking channel with the center of the sucker being separated and closed from the oil conservator, and the other end of the gas pipe is communicated with the nicotine oil fuming device.

The fuming device control switch includes a silicon film-coated tablet and a switch circuit board controlled by a Hall element and a field-effect tube, the silicon film-coated tablet is mounted in a support, the silicon film-coated tablet makes one end of the support form a sealing structure, and the other end of the support is communicated with the smoking channel on the sucker.

The nicotine oil fuming device includes an oil storage device, a temporary oil storage device composed of a set of capillary tubes and an electric heating film wire, the oil storage device is in contact with the temporary oil storage device and the oil conservator in the sucker, and the electric

heating film wire is electrically connected with the battery through the fuming device control switch.

The utility model has the beneficial effects of simple structure, low manufacturing cost, convenient use and having the same effect with the tobacco taking, and the nicotine oil smoke contains no nicotine that is harm to the human body, thereby overcoming the influence of tobacco taking to the human health.

The utility model is described in detail below in conjunction with the accompanying drawings.

Fig. 1 is a schematic diagram of the utility model.

Fig. 2 is a schematic diagram of a nicotine oil fuming device.

Fig. 3 is a schematic diagram of a fuming device control switch.

In the accompanying drawings, 1 sucker, 2 cigarette rod shell, 3 battery, 4 fuming device control switch, 5 nicotine oil fuming device, 6 waterproof sleeve with bell mouth, 7 oil conservator, 8 gas pipe, 9 gas pipe support, 10 smoking channel, 11 silicon film-coated tablet, 12 switch circuit board. 13 support, 14 oil storage device, 15 temporary oil storage device, 16 electric heating film wire, 17 luminous display panel, 18 lamp cover.

Detailed Description of Embodiments

Referring to the accompanying drawings, an electronic cigarette comprises: a sucker 1, a cigarette rod shell 2, a battery 3, a nicotine oil fuming device 5 and a fuming device control switch 4, the sucker 1 is connected with the cigarette rod shell 2, and the battery 3, the fuming device control switch 4 and the nicotine oil fuming device 5 are sequentially nested in the cigarette rod shell 2.

A nicotine oil storage sleeve 7 is nested in the sucker 1, a gas pipe 8 is nested in the center of the evaporation oil storage sleeve 7, the gas pipe 8 is connected with a gas pipe support 9, the gas pipe 8 and the gas pipe support 9 form a smoking channel 10 with the center of the sucker 1 being separated and closed from the oil conservator 7, and the other end of the smoke sucking pipe 8 is communicated with the nicotine oil fuming device 5.

The fuming device control switch 4 includes a silicon film-coated tablet 11 with a magnet and a switch circuit board 12 controlled by a Hall element and a field-effect tube, the silicon film-coated tablet 11 with the magnet is mounted on a support 13, the silicon film-coated tablet 11 makes one end of the support 13 form a sealing structure, and the other end of the support 13 is communicated with the smoking channel 10 on the sucker 1.

The nicotine oil fuming device 5 includes an oil storage device 14, a temporary oil storage device 15 composed of a set of capillary tubes and an electric heating film wire 16, the oil storage device 14 is in contact with the temporary oil storage device 15 and the oil conservator 7 in the sucker 1, the electric heating film wire 16 is wound on the temporary oil storage device 15, and the electric heating film wire 16 is electrically connected with the battery 3 through the fuming device control switch 4.

When the utility model is in use, the smoking channel 10 generates a negative pressure in the

atomizer control switch 4 by a suction force of a user, the silicon film-coated tablet 11 bulges in the support 13 towards the direction of the switch circuit board 12, under the control of the Hall element and the field-effect tube, the switch circuit board 12 makes the electric heating film wire 16 be communicated with the battery 3, due to the action of the capillary tubes, the temporary oil storage device 15 sucks in nicotine oil stored in the nicotine oil storage device 14, when the electric heating film wire 16 is powered on to heat, nicotine oil on the temporary oil storage device 15 is fumed to produce nicotine oil smoke, and the nicotine oil smoke is smoked by the user through the gas pipe 8 and the smoking channel 10.

In order to increase a storage amount of nicotine oil, the oil conservator 7 is nested in the sucker 1, and the oil conservator 7 is in contact with the oil storage device 14 and supplies nicotine oil to the oil storage device 14. The oil conservator 7, the oil storage device 14 and the temporary oil storage device 15 are made of cotton yarn or sponge materials that can absorb nicotine oil.

In the utility model, in order to display a working state of the electronic cigarette, a luminous display panel 17 is disposed in one end of the cigarette rod shell 2, the luminous display panel 17 is fixed at one end of the cigarette rod shell 2 via a lamp cover 18, and the luminous display panel 17 is electrically connected with the battery 3 via the fuming device control switch 4. When the nicotine oil fuming device 5 works, the luminous display panel 17 emits light, and the light is emitted to the outside of the cigarette rod shell 2 through the transparent lamp cover 18.

In the utility model, in order to solve the problem that moisture in the nicotine oil smoke is sucked into the user’s mouth, a waterproof bell mouth 6 is arranged at a communicating end of the gas pipe 8 with the nicotine oil fuming device 5, and the waterproof bell mouth 6 may adsorb and coagulate moisture in the nicotine oil smoke.

The embodiments of the utility model prove that the nicotine oil fuming device in the electronic cigarette has high electrothermal conversion efficiency and long service life, experiments prove that it may save 40% of electricity compared with a fuming device in the prior art, and according to the electronic cigarette, while retaining that tobacco may make the user generate excitement and mouthfeel, the carcinogenic risk of the human bodies caused by tar in the cigarette can be completely eliminated, and the smoker can achieve the goal of gradually quitting smoking.

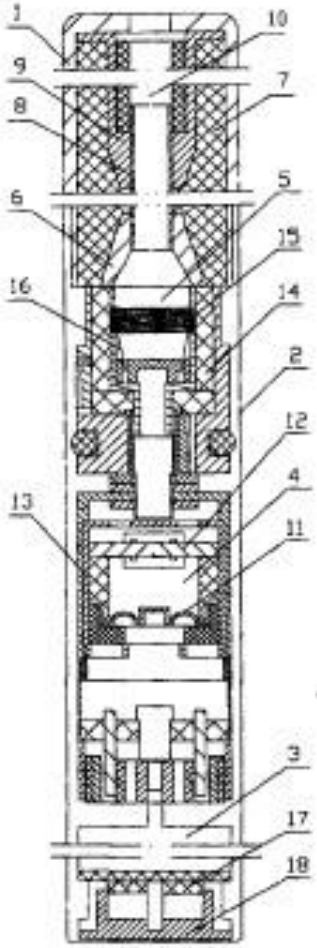


Fig. 1

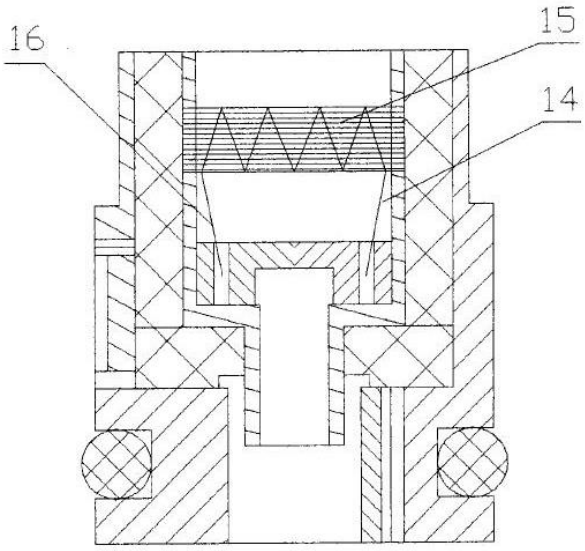


Fig. 2

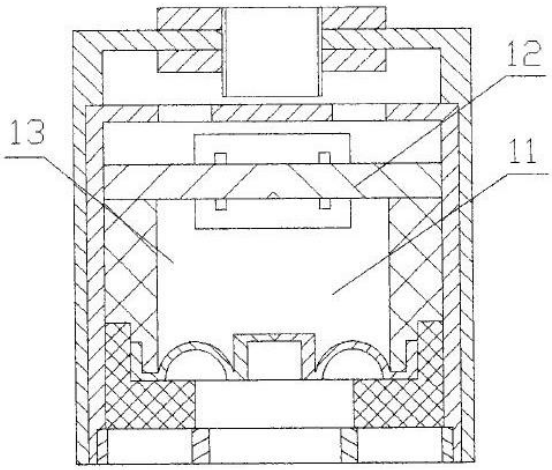


Fig. 3