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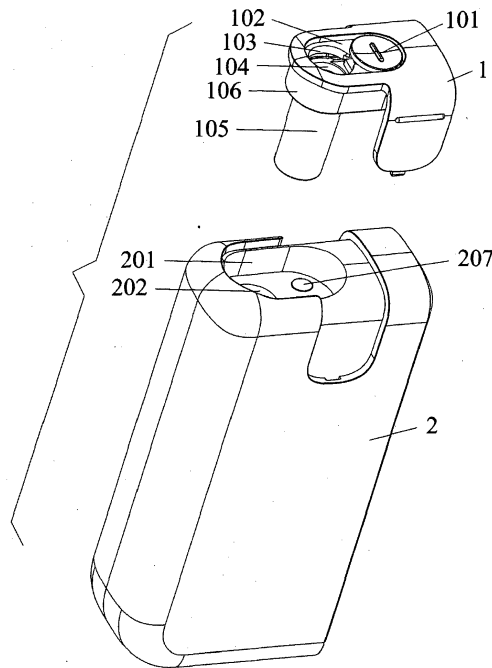
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(54) **HEATED TOBACCO PRODUCT**

(57) A heated tobacco product includes a main body (2) and a fixing member (1). The main body includes a first chamber, and the fixing member is detachably disposed in the first chamber. The fixing member includes

a second chamber (104) configured to hold a tobacco stick. One end of the second chamber includes a first opening (103) through which the tobacco stick is inserted into the second chamber.



**FIG. 1**

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## Description

**[0001]** The disclosure relates to a heated tobacco product.

**[0002]** A heated tobacco product (HTP) is a tobacco product that heats the tobacco at a lower temperature than conventional cigarettes.

**[0003]** The chamber for accommodating a tobacco stick of a conventional heated tobacco product has a fixed depth and diameter. The tobacco stick must have the exactly same size as the chamber. Thus, conventional heated tobacco products cannot adapt to heat tobacco sticks in different specifications.

**[0004]** The disclosure provides a heated tobacco product comprising a fixing member and a main body; the fixing member is detachably connected to the main body, which allows the heated tobacco product to receive any kind of tobacco sticks in various sizes.

**[0005]** The following advantages are associated with the heated tobacco product of the disclosure: the fixing member is detachably connected to the main body, which allows for easy replacement of fixing members with different sizes, which allows insertion of any kind of the tobacco sticks into the heated tobacco product as well.

FIG. 1 is an exploded view of a heated tobacco product according to one embodiment of the disclosure;

FIG. 2 is a perspective view of a heated tobacco product according to one embodiment of the disclosure;

FIG. 3 is a cross-sectional view of a heated tobacco product according to one embodiment of the disclosure; and

FIG. 4 is a perspective view of a fixing member according to one embodiment of the disclosure.

**[0006]** In the drawings, the following reference numbers are used: 1. Fixing member; 2. Main body; 101. Sliding member; 102. First concave part; 103. First opening; 104. Second chamber; 105. First tube; 106. Convex part; 107. Second bottom wall; 108. Through hole; 109. First magnetic member; 201. Second concave part; 202. Second opening; 203. Passage; 204. Second tube; 205. Third bottom wall; 206. Heating element; 207. Second magnetic member; and 208. Power button.

**[0007]** To further illustrate the disclosure, embodiments detailing a heated tobacco product are described below. It should be noted that the following embodiments are intended to describe and not to limit the disclosure.

**[0008]** As shown in FIGS. 1-4, a heated tobacco product comprises a main body 2 and a fixing member. The main body 2 comprises a first chamber, and the fixing member is detachably disposed in the first chamber. The fixing member 1 comprises a second chamber 104 configured to hold a tobacco stick. One end of the second

chamber 104 comprises a first opening 103 through which the tobacco stick is inserted into the second chamber 104. The fixing member 1 is detachably connected to the main body 2, which allows for rapid replacement of fixing members with different diameters and depths, which allows insertion of any kind of tobacco sticks into the heated tobacco product as well. The first chamber and the second chamber 104 can be of any shape without departing from the scope and spirit of the disclosure.

**[0009]** In certain examples, the fixing member 1 further comprises a first connector, and the first chamber comprises a second connector. The first connector is detachably connected to the second connector so as to secure the fixing member 1 in the first chamber. In certain examples, the first chamber is not provided with the second connector, which means that the fixing member 1 is detachably disposed in the first chamber through only the first connector. In certain examples, the fixing member 1 is not provided with the first connector, which means that the fixing member 1 is detachably disposed in the first chamber through only the second connector. Preferably, the first connector is detachably connected to the second connector to ensure that the fixing member 1 is disposed in the first chamber.

**[0010]** In certain examples, the first connector comprises a first thread, a first interference fit part, a first snap-fit part, a first magnetic member, a first adhesive, a first pluggable connector, or a combination thereof. The first thread is a helical structure. The first snap-fit part comprises a depression and a protrusion which can be deflected to catch the depression. The first magnetic member includes, but is not limited to, at least one piece of iron and at least one magnet. The first adhesive includes, but is not limited to, a hook and loop fastener. The first pluggable connector can be any shape, and comprises a slot and a plug which can be fitted into the slot.

**[0011]** In certain examples, the second connector comprises a second thread, a second interference fit part, a second snap-fit part, a second magnetic member, a second adhesive, a second pluggable connector, or a combination thereof. Preferably, both the first connector and the second connector are magnets through which the fixing member 1 can be affixed to or detached from the main body 2. The attraction between the magnets allows for convenient replacement of fixing members 1 in various diameters and depths. The second thread is a helical structure. The second snap-fit part comprises a depression and a protrusion which can be deflected to catch the depression. The second magnetic member includes, but is not limited to, at least one piece of iron and at least one magnet. The second adhesive includes, but is not limited to, a hook and loop fastener. The second pluggable connector can be any shape, and comprises a slot and a plug which can be fitted into the slot.

**[0012]** In certain examples, the fixing member 1 further comprises a first tube 105 which is provided with a hollow space functioning as the second chamber 104.

**[0013]** In certain examples, one end of the fixing member 1 is recessed to form a first concave part 102 surrounded by a first bottom wall. The first opening 103 is disposed on the first bottom wall. The fixing member 1 further comprises a sliding member 101 slidable with respect to the first concave part 102. Another end of the fixing member 1 shrinks and extends axially to form a convex part 106. The first opening 103 extends through the convex part 106. The fixing member 1 further comprises a first tube 105 extending downward from the first bottom wall and communicating with the first opening. The first tube 105 is disposed through one end of the convex part 106 into the first opening 103. The first tube 105 is affixed to the first bottom wall using integral formation or other connection means. The first concave part 102 comprises an inner surface and a groove disposed on the inner surface. The sliding member 101 is movable in the groove. The sliding member 101 slides to one end of the first concave part 102 so as to allow the tobacco stick to be inserted through the first opening 103. The sliding member 101 slides to another end of the first concave part 102 so as to cover the first opening 103.

**[0014]** In certain examples, the first tube 105 comprises a distal end away from the first opening 103, and the distal end comprises a second bottom wall 107 comprising a through hole 108.

**[0015]** In certain examples, the main body 2 further comprises a second tube 204 and a heating element 206. The second tube 204 comprises a passage 203. One end of the second tube 204 comprises a second opening 202, and another end of the second tube 204 comprises a third bottom wall 205. The heating element 206 is disposed in the second tube 204 to heat the tobacco stick. The first tube 105 is matched with the second tube 204 in shape and size.

**[0016]** In certain examples, one end of the main body 2 is recessed to form a second concave part 201 surrounded by a fourth bottom wall. The first chamber comprises the second concave part 201. The second concave part 201 is matched with the convex part 106 in shape and size. The second opening 202 is disposed on the fourth bottom wall. The second tube 204 extends downward from the second opening 202 into the main body. The main body 2 comprises a casing comprising a space.

**[0017]** In certain examples, the first connector comprises at least one first magnetic member 109 disposed on one end of the convex part 106. The second connector comprises at least one second magnetic member 207 disposed on the fourth bottom wall. Understandably, both the first magnetic member 109 and the second magnetic member 207 separately comprise at least one piece of iron or at least one magnet, which are disposed on the bottom or side surface of the convex part 106 or the second concave part 201, thus providing a stable connection between the fixing member 1 and the main body 2.

**[0018]** In certain examples, the fixing member 1 is disposed on the one end of the main body 2. The convex

part 106 is in contact with the second concave part 201. The first magnetic member 109 and the second magnetic member 207 are opposite to each other. The first tube 105 is detachably disposed through the second opening 202 into the passage 203. The heating element 206 is disposed through the through hole 108 into the second chamber 104. The tobacco stick is inserted through the first opening 103 into the second chamber 104. The heating element 206 is inserted into the tobacco stick and energized to produce heat. In an alternative preferred example of the disclosure, referring to FIGS. 1-4, a heated tobacco product comprises a fixing member 1 and a main body 2. The fixing member comprises a sliding member 101 and a first tube 105. The main body comprises a second tube 204, a heating element, a casing, and a power button 208. One end of the fixing member 1 is recessed to form a first concave part 102 surrounded by a first bottom wall. The first bottom wall comprises a first opening 103 for receiving the tobacco stick. The sliding member 101 is slidable in a groove on the side wall of the first concave part 102. The sliding member 101 slides to one end of the first concave part 102 so as to allow the tobacco stick to be inserted through the first opening 103. The sliding member 101 slides to another end of the first concave part 102 so as to cover the first opening 103. Another end of the fixing member 1 shrinks and extends axially to form a convex part 106. The first opening 103 extends through the convex part 106. The first tube 105 is inserted through one end of the convex part 106 into the first opening 103. The first tube 105 comprises a second chamber 104 used to hold the tobacco stick. A first magnetic member 109 is disposed on the bottom surface of the convex part 106 so as to secure to the main body 2 by magnetic attraction. One end of the main body 2 is recessed to form a second concave part 201 surrounded by a fourth bottom wall. The second concave part 201 is matched with the convex part 106 in shape and size. The fourth bottom wall comprises a second opening 202. The second tube 204 extends downward from the second opening 202. The second tube 204 comprises a passage 203 communicating with the second opening 202. The second tube 204 comprises a distal end away from the second opening 202, and the second distal end comprises a third bottom wall 205. The heating element 206 is disposed in the second tube 204 to heat the tobacco stick. A second magnetic member 207 is disposed on the fourth bottom wall. The fixing member 1 is disposed on a top portion of the main body 2. The convex part 106 is in contact with the second concave part 201. The first magnetic member 109 and the second magnetic member 207 are opposite to each other and can attract each other. The first tube 105 is inserted through the second opening 202 into the passage 203. The first tube 105 comprises a distal end away from the first opening 103, and the distal end comprises a second bottom wall 107 comprising a through hole 108. The heating element 206 is disposed through the through hole 108 into the second chamber 104. The tobacco stick is

inserted through the first opening 103 into the second chamber 104. The heating element 206 is inserted into the tobacco stick and energized to produce heat. The power button 208 is disposed on one side of the casing. The power button 208 is configured to turn on/off the heated tobacco product.

**[0019]** It will be obvious to those skilled in the art that changes and modifications may be made, and therefore, the aim in the appended claims is to cover all such changes and modifications.

## Claims

1. A heated tobacco product, comprising a main body and a fixing member; wherein the main body comprises a first chamber, and the fixing member is detachably disposed in the first chamber; the fixing member comprises a second chamber configured to hold a tobacco stick; and one end of the second chamber comprises a first opening through which the tobacco stick is inserted into the second chamber.
2. The heated tobacco product of claim 1, wherein
  - the fixing member further comprises a first connector, and the first chamber comprises a second connector; the first connector is detachably connected to the second connector so as to secure the fixing member in the first chamber; or
  - the fixing member is detachably disposed in the first chamber through the first connector; or
  - the fixing member is detachably disposed in the first chamber through the second connector.
3. The heated tobacco product of claim 2, wherein the first connector comprises a first thread, a first interference fit part, a first snap-fit part, a first magnetic member, a first adhesive, a first pluggable connector, or a combination thereof; and the second connector comprises a second thread, a second interference fit part, a second snap-fit part, a second magnetic member, a second adhesive, a second pluggable connector, or a combination thereof.
4. The heated tobacco product of claim 3, wherein the fixing member further comprises a first tube which is provided with a hollow space functioning as the second chamber.
5. The heated tobacco product of claim 4, wherein one end of the fixing member is recessed to form a first concave part surrounded by a first bottom wall; the first opening is disposed on the first bottom wall; the fixing member further comprises a sliding member slidable with respect to the first concave part; another end of the fixing member shrinks and extends axially

to form a convex part; the first opening extends through the convex part; and the fixing member further comprises a first tube extending downward from the first bottom wall and communicating with the first opening.

6. The heated tobacco product of claim 5, wherein the first tube comprises a distal end away from the first opening, and the distal end comprises a second bottom wall comprising a through hole.
7. The heated tobacco product of claim 6, wherein the main body further comprises a second tube and a heating element; the second tube comprises a passage; one end of the second tube comprises a second opening, and another end of the second tube comprises a third bottom wall; the heating element is disposed in the second tube to heat the tobacco stick; and the first tube is matched with the second tube in shape and size.
8. The heated tobacco product of claim 7, wherein one end of the main body is recessed to form a second concave part surrounded by a fourth bottom wall; the first chamber comprises the second concave part; the second concave part is matched with the convex part in shape and size; the second opening is disposed on the fourth bottom wall; and the second tube extends downward from the second opening into the main body.
9. The heated tobacco product of claim 8, wherein the first connector comprises at least one first magnetic member disposed on one end of the convex part; and the second connector comprises at least one second magnetic member disposed on the fourth bottom wall.
10. The heated tobacco product of claim 9, wherein the fixing member is disposed on the one end of the main body; the convex part is in contact with the second concave part; the first magnetic member and the second magnetic member are opposite to each other; the first tube is detachably disposed through the second opening into the passage; and the heating element is disposed through the through hole into the second chamber.

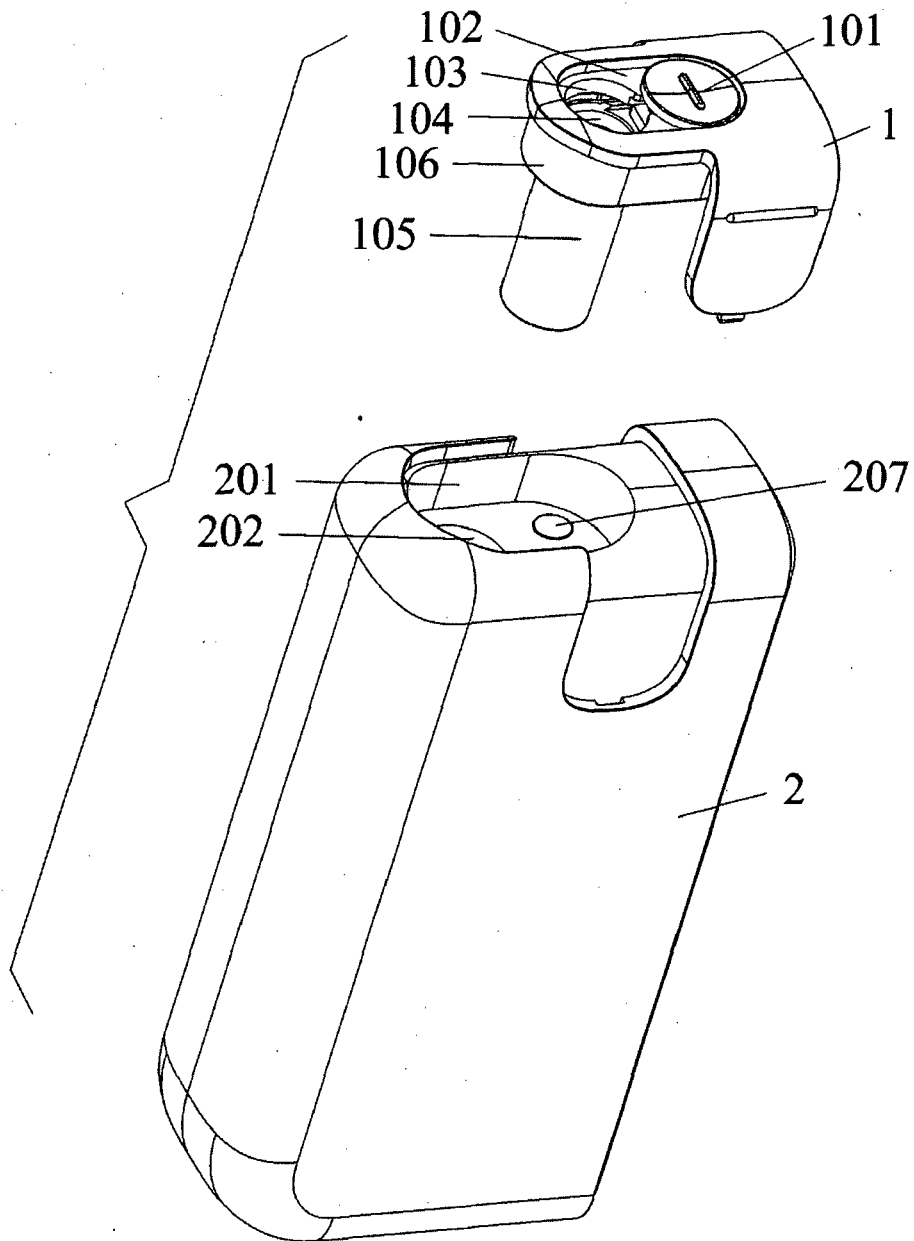


FIG. 1

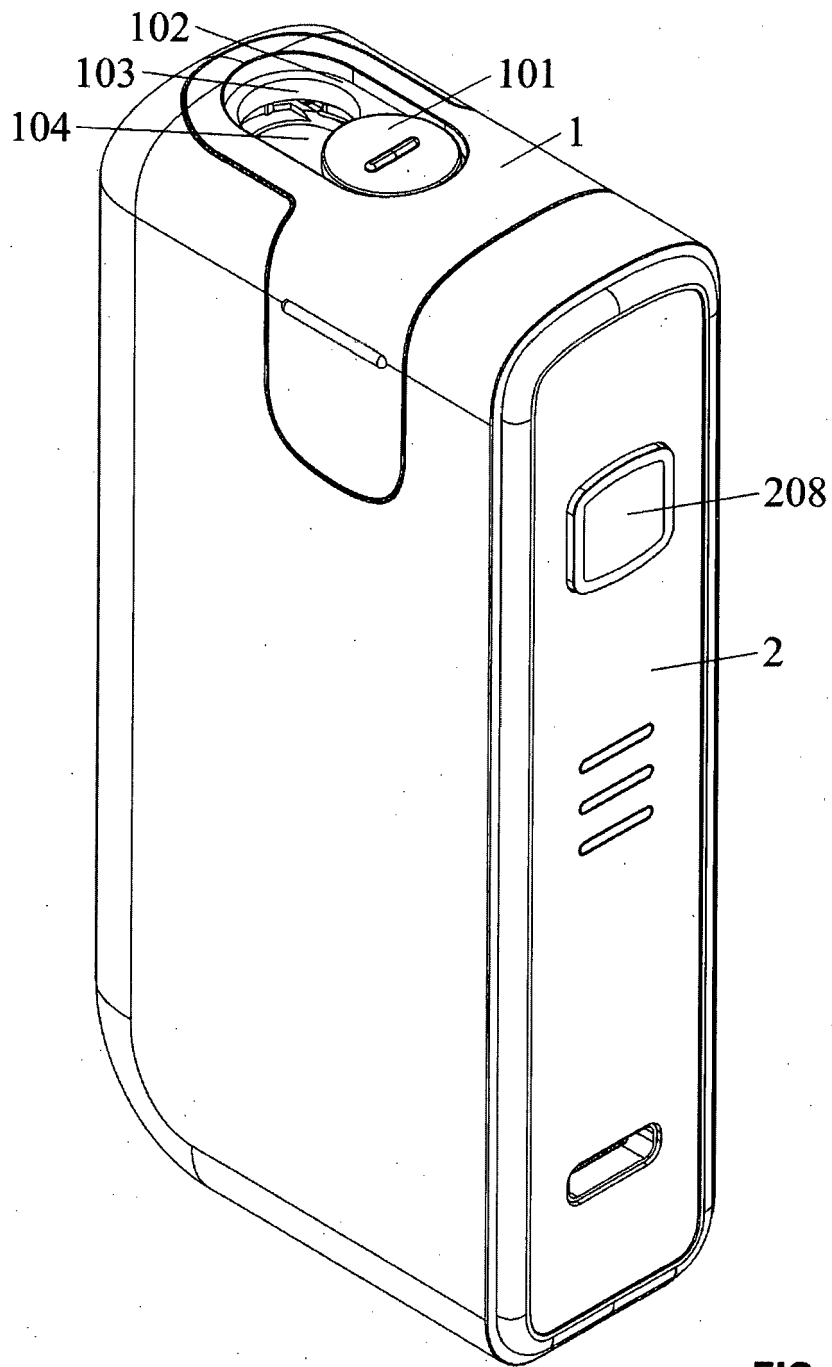


FIG. 2

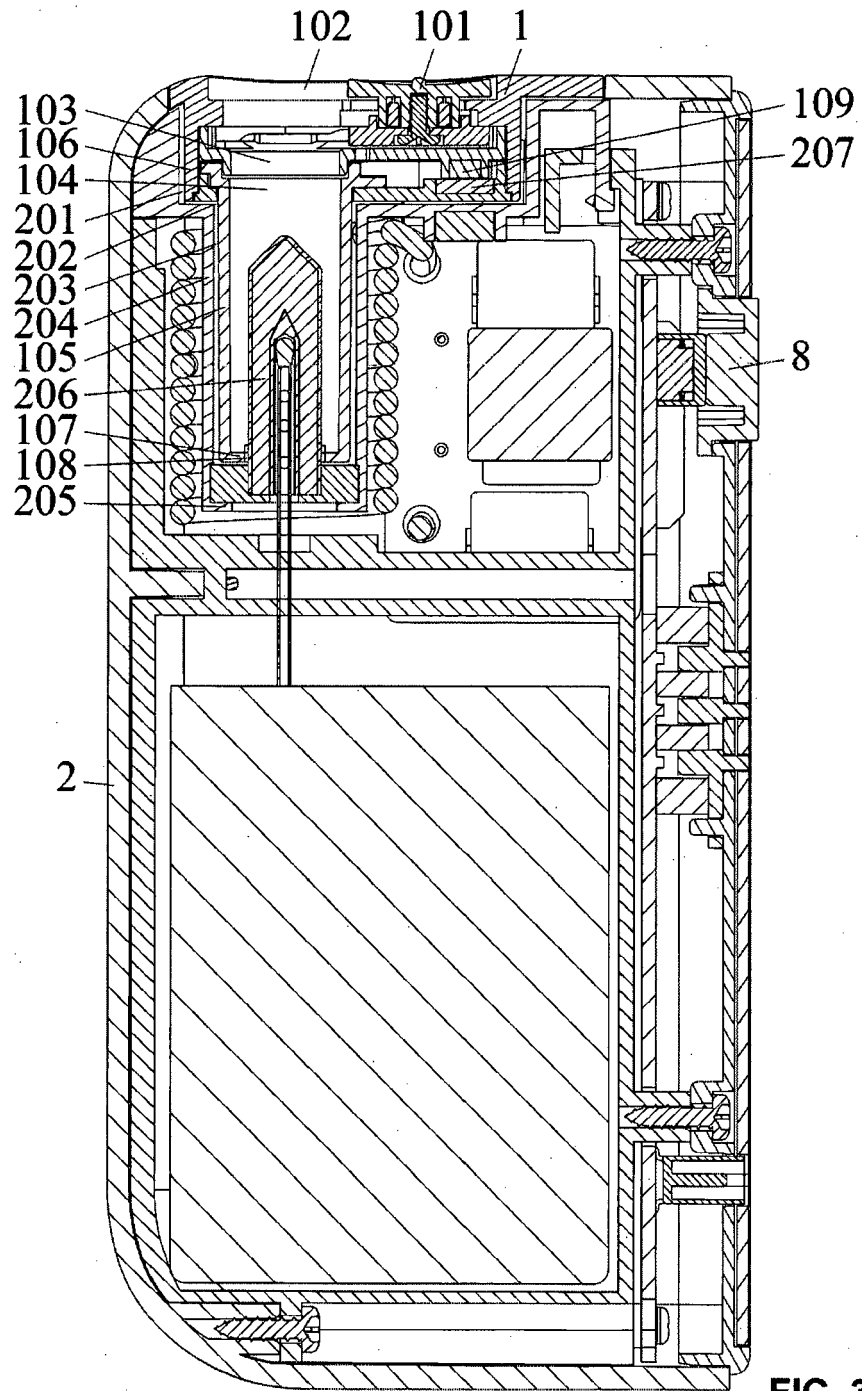


FIG. 3

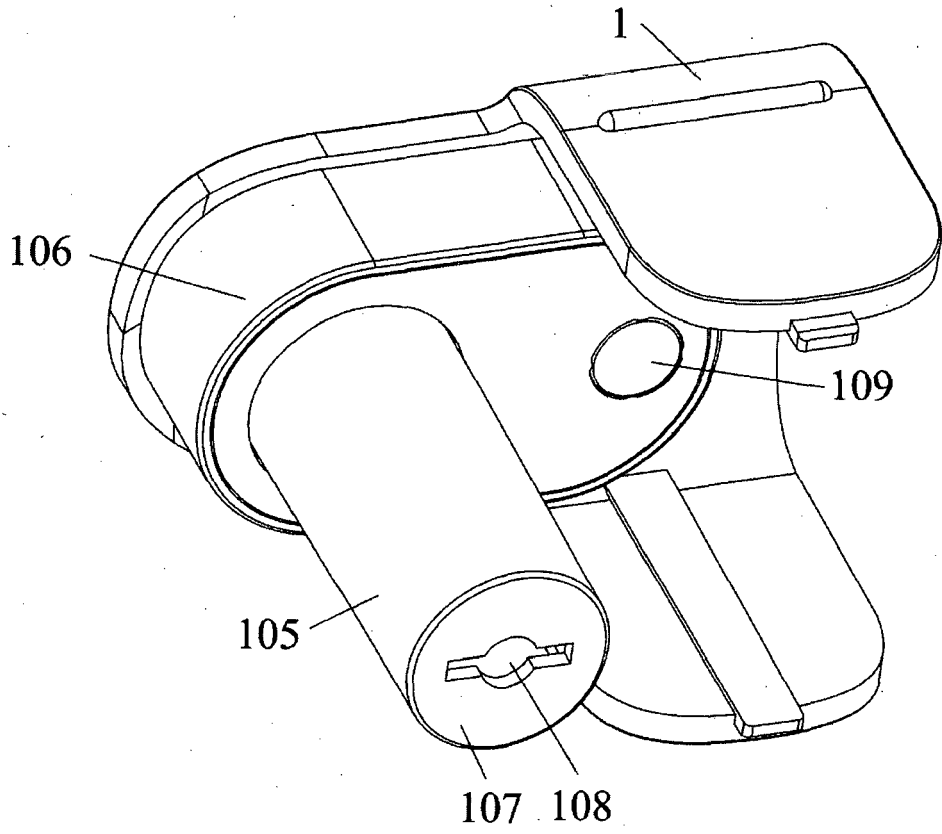


FIG. 4





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Application Number  
EP 22 00 0110

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