(19) Europäisches Patentamt
European Patent Office
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(11) **EP 2 481 306 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
01.08.2012 Bulletin 2012/31

(51) Int Cl.:
A24C 5/60 *(2006.01)* ***A24F 25/00*** *(2006.01)*

(21) Application number: **11194529.1**

(22) Date of filing: **20.12.2011**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(30) Priority: **30.01.2011 US 201161437642 P**

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(54) **Method and device for flavouring a cigarette**

(57) The invention relates to the influencing of "flavour / smell" of cigarette (11) while smoking, by injecting additives to the cigarette, at the filter side or the tobacco side, using a device (20) specially designed for this purpose.

The user controls the cigarette taste, intensity of taste, and the smell by choosing the liquid material and quantity to be injected into the cigarette (11) before or while smoking.

The invention is intended to improve the experience of smoking of any desired cigarette.

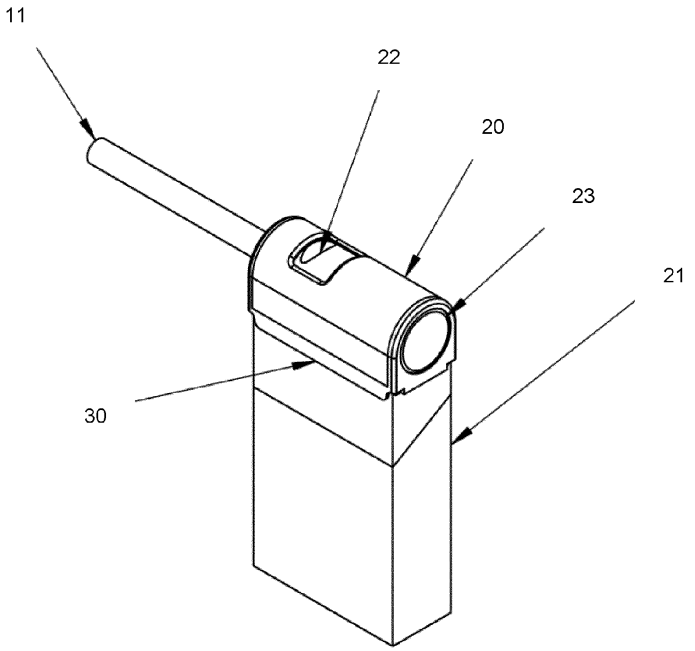

Fig 2

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Description

BACKGROUND OF THE INVENTION

[0001] Cigarette flavour and smell may be influenced by many factors such as tobacco type, filter type, wrapping paper type, chemical additives, fragile flavour-adding capsules pre-arranged inside the filter during manufacture, etc.

[0002] Usually cigarettes are produced to provide specific and known taste or flavour chosen by manufacturer. The user has no flexibility to change or improve the cigarette taste by adding his preferred flavour type and flavour intensity to fit his preferences.

BRIEF SUMMARY OF THE INVENTION

[0003] The invention relates to the influencing of "flavour & smell" of a cigarette while smoking, by injecting liquid additives to the cigarette, at the filter side or the tobacco side, using injecting device specially designed for this purpose.

[0004] The user may control the cigarette taste, intensity of taste, and the smell by choosing the type material and quantity to be injected to the cigarette before or while smoking.

[0005] The invention is intended to improve the experience of smoking of any desired cigarette.

[0006] Various insertion devices may fit for injecting the materials into the cigarette, two optional designs are illustrated.

[0007] The devices of the present invention are designed to fit the standard cigarette with or without filter, either as standalone unit or attached to a cigarette box.

[0008] However the invention is not limited to any specific injecting mechanism design or any specific configuration and may include other injecting mechanism design or configuration options.

[0009] In the first embodiment (Fig 1) a standard cigarette containing a tobacco rod and filter may be inserted through the open hall or cup into the standalone injection device.

[0010] While inserting the cigarette into the device, a concentric spring leads the cigarette to ensure that an injection nozzle located at the end of the hall penetrates gently right to the center of the cigarette.

[0011] An injecting button is located on the opposite side of the device, i.e. opposite to the side which is adapted to receive the cigarette. Pushing the button will lead to injecting controlled flavour material into the cigarette.

[0012] Repeating pushing the button will lead to repeated injection of additional flavour material, if stronger flavour or smell is desired.

[0013] In the second embodiment (Fig 2&3) the cigarette is inserted through the open hall in the injection device attached to the cigarette package. The filter side is inserted first.

[0014] While pushing the cigarette into the device an injection nozzle of the device gently penetrates the cigarette filter.

[0015] Pressing the container located on the rear side of the device will operate the injecting mechanism, and a limited portion of flavour liquid material is injected into the cigarette filter.

[0016] Repeating pressing the container will lead to repeated injection of additional measured flavour material, if stronger flavour taste or smell is desired.

DESCRIPTION OF THE DRAWINGS

[0017]

Fig 1 shows a standalone injecting device 20a, which comprises an injection button 1 attached to a flexible membrane 5 or a piston 5 by a rigid shaft 4. The shaft 4 and membrane 5 are normally held in upper position by a compression spring 3. The membrane 5 is located inside a flavour liquid container. A nozzle 7 is located on the bottom side of the unit which covered by a cup 9, the cup 9 is sealed with two sets of O-rings 8.

Fig 2 shows an isometric view of an injecting device 20 mounted on a pack of cigarettes 21. A cigarette 11 is inserted into the device through the open end. A sliding ejecting button 22 is provided for ejecting the flavour liquid material container 23.

Fig 3 shows detailed view cut of the device of Fig 2. The device is attached to a cigarette package 21. A cigarette 11 is inserted from the open side. A device housing 30 together with an upper cover 35, hold together internal parts including: nozzle 7 which penetrate the cigarette filter and injecting liquid mechanism 38. Disclosed are also the flavour liquid material container 23, for holding flavour material, and the container ejecting button 22.

DETAILED DESCRIPTION OF THE INVENTION

[0018] The invention relates to unique device 20a, 20 specially designed to release controlled amount of flavour material into a cigarette 11. The additive material affects the cigarette flavour or smell, or both flavour and smell, of the cigarette 11.

[0019] To provide the smoker the freedom of controlling the cigarette taste, the special device 20a, 20 design allows the injection of material at a controlled quantity to the cigarette 11.

[0020] The smoker may choose different type of additives liquid material, such as mint, cherry or coffee flavour or any other taste to be injected to the cigarette 11 using the device 20a, 20.

[0021] The smoker can achieve the taste required, at any time during smoking the cigarette, and at any intensity required, by injecting the material at the time desired

and controlling the amount injected.

[0022] The device design may fit one of the options illustrated such as a standalone device 20a, a device 20 which is attached to a cigarette pack, or any other option such as device which is attached to a cigarette lighter device (not shown) or is attached to mouth freshener or any other configuration.

[0023] As has been described, different embodiments are conceivable, where the injection is effected by pressing a button 1 or by pressing a flavour material container 23. Both may be applied on the standalone injecting device 20a and the injecting device 20 which is adapted to be mounted on a pack of cigarettes, respectively. The injecting device 20 which is adapted to be mounted on a pack of cigarettes comprises attachment flanges or lips which protrude from the device 20 for engaging at least two outer edges of the cigarette pack. The embodiment of figure 2 comprises four such attachment flanges or lips, which engage the cigarette pack.

The mechanism

[0024] The mechanism used to insert the additive liquid through the nozzle 7 to the cigarette may be similar to the options described hereby or any other alternative mechanism which may be used for the same purpose.

The container

[0025] The container 23 located in the device 20 is filled with the additive may be either used as disposable reservoir or as re-used unit to be filled whenever the content of the container is fully used. It might be designed as integral part of the device or as replaceable unit to be ejected from the device from time to time when it is fully used and shall be replaced by a filled container.

The additive flavour liquid material

[0026] The flavour liquid material may fit any desired taste and be delivered in either filled cartridges or in container for refill use.

List of parts compatible with attached drawings

[0027]

Fig 1

1. Push button
2. Button housing
3. Helical compression spring
4. Diaphragm shaft
5. Flexible diaphragm or membrane
6. Housing for standalone device
7. Penetrating nozzle
8. O-Rings
9. Cup for receiving and guiding a cigarette end

20a. Device for flavouring a cigarette

Fig 2&3

7. Penetrating nozzle
11. Cigarette
20. Device for flavouring a cigarette
21. Cigarette package
22. Ejecting container sliding button
23. Flavour material container
25. Container ejecting (button) spring
30. Device body
35. Upper device cover
38. Injecting mechanism

ASPECTS OF THE INVENTION

[0028] A first aspect relates to a method of adopting cigarette flavour and to the smoker preference before or while smoking the cigarette, by using special device to insert additives material to the cigarette.

[0029] A second aspect relates to a device specially designed to insert material to the cigarette, for adopting it's taste to specific desired taste.

[0030] A third aspect relates to the device of the second aspect attached to the cigarette package.

[0031] A fourth aspect relates to the device of the second aspect together with lighter in one unit.

[0032] A fifth aspect relates to the device of the fourth aspect attached to the cigarette package.

[0033] A sixth aspect relates to an additive material with coffee flavour to imitate coffee taste flavour with cigarette smoking.

Claims

1. A method of adapting cigarette (11) flavour and taste to the smoker preference before or while smoking the cigarette, by using special device (20a, 20) to insert additives material to the cigarette.

2. The method of claim 1, comprising the step of injecting additives to the cigarette (11) at the filter side.

3. The method of claim 1, comprising the step of injecting additives to the cigarette (11) at the tobacco side.

4. The method of any preceding claim, wherein the additives material is inserted by penetrating the cigarette (11) by means of a nozzle (7) and injecting the additives material into the cigarette (11), where after the additives material can be inhaled by the smoker together with the tobacco smoke.

5. A device (20a, 20) specially designed to insert material into a cigarette (11), for adapting the taste of said cigarette to a specific desired taste.

6. The device of claim 5, which device (20) is adapted to be attached to a cigarette package (21).

7. The device of claim 5, formed together with a lighter in one unit.

8. The device of claim 7, adapted to be attached to a cigarette package (21).

9. The device (20a, 20) of any one of claims 5-8, comprising a flavour material container (23) and a penetrating nozzle (7), which penetrating nozzle (7) is adapted to be inserted into the cigarette (11) and inject flavour material of the flavour material container (23) into the cigarette (11).

10. The device (20a, 20) of claim 9, adapted such that the flavour material injection is activated by pressing the flavour material container (23).

11. The device (20a, 20) of claim 9 comprising a button (1), wherein the device is adapted such that the flavour material injection is activated by pushing the button (1).

12. The device (20a, 20) of claim 11, wherein the button (1) is located on the back side of the device (20a), i.e. the side of the device which faces away from the cigarette (11) to be flavoured.

13. The device (20a, 20) of claim 11 or 12, wherein the button (1) is connected to a flexible diaphragm (5) or a piston (5) which is adapted to pressurize flavour liquid within the flavour material container (23), when the button(1) is pushed.

14. The device (20a, 20) of claim 13, wherein the flexible diaphragm (5) or piston (5) is located within the flavour material container (23).

15. The device (20a, 20) of any one of claims 5-14, comprising an open cup (9) which is adapted to receive a cigarette (11) end and guide the cigarette so that a penetrating nozzle (6) may be brought to enter the cigarette (11) centrally.

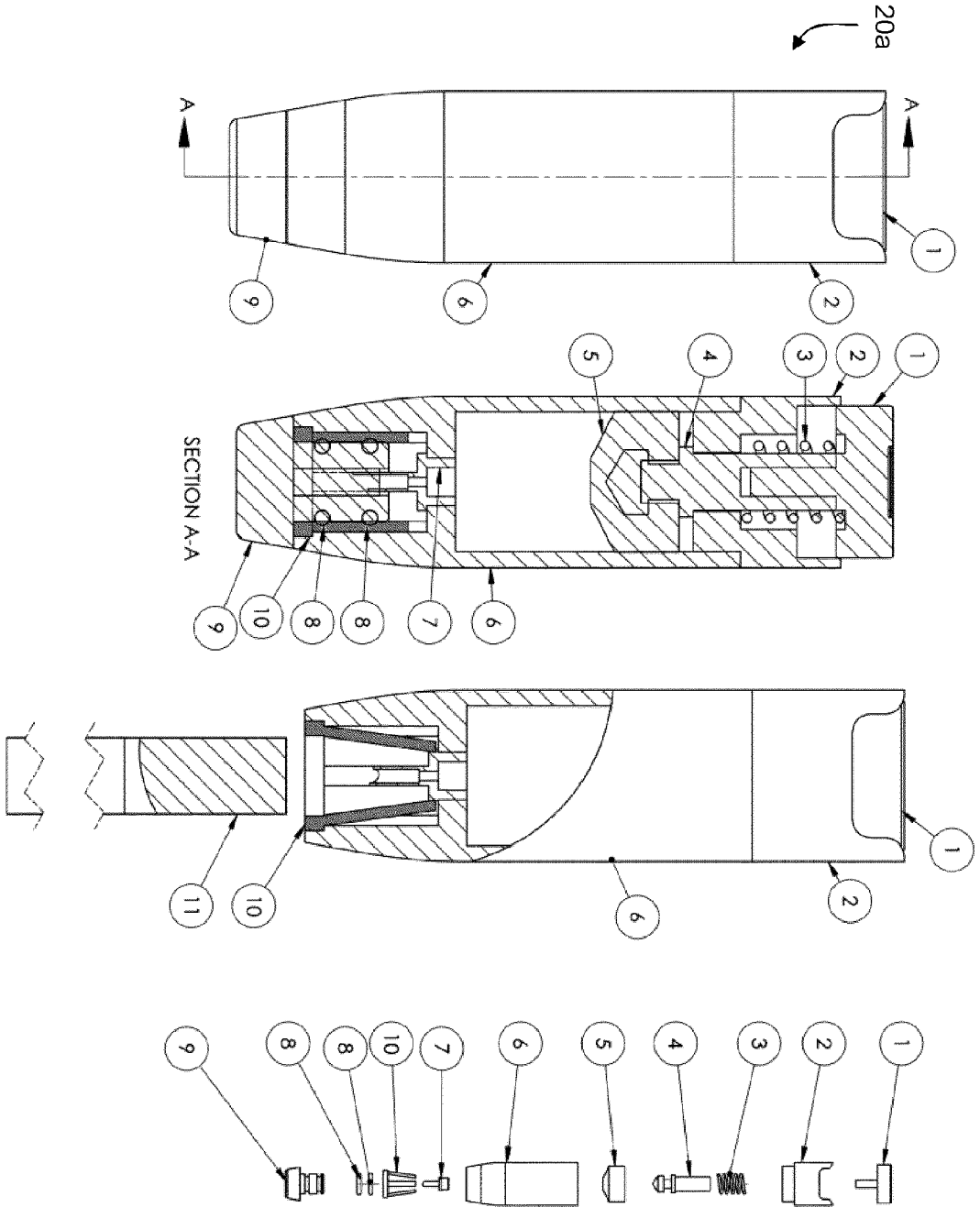

Fig 1

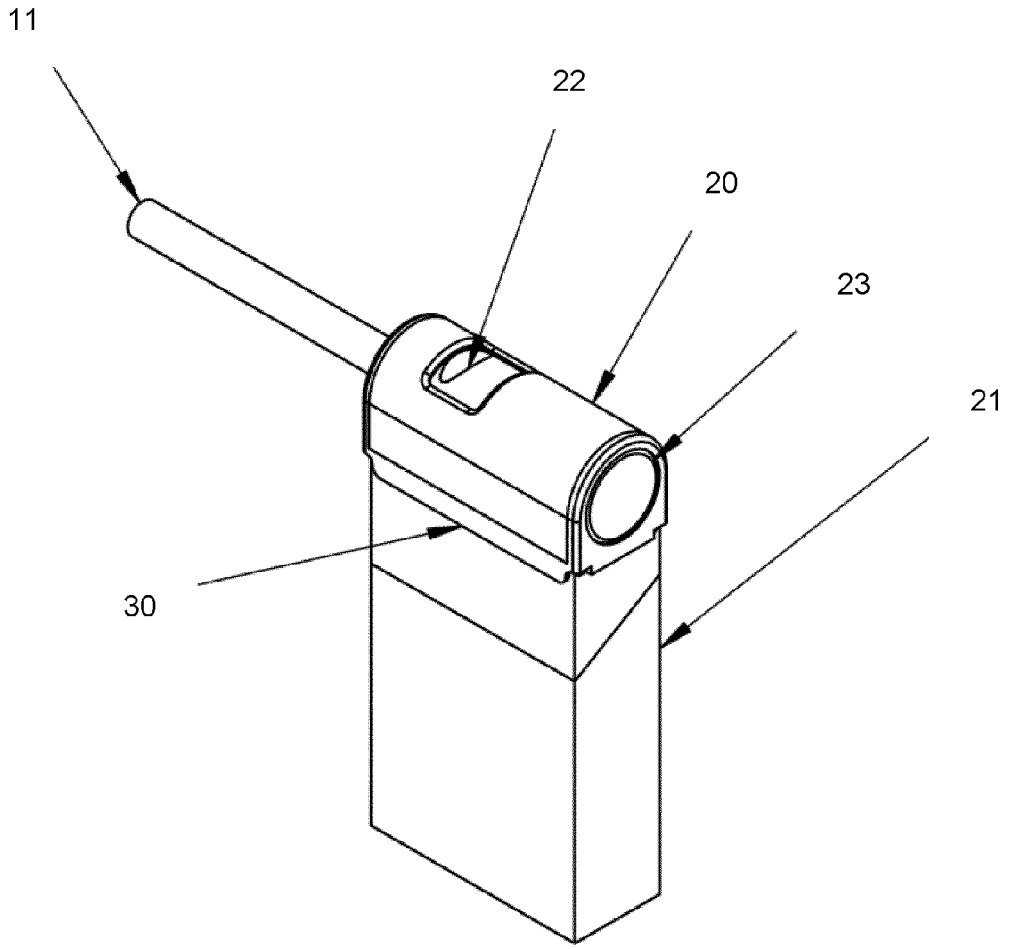

Fig 2

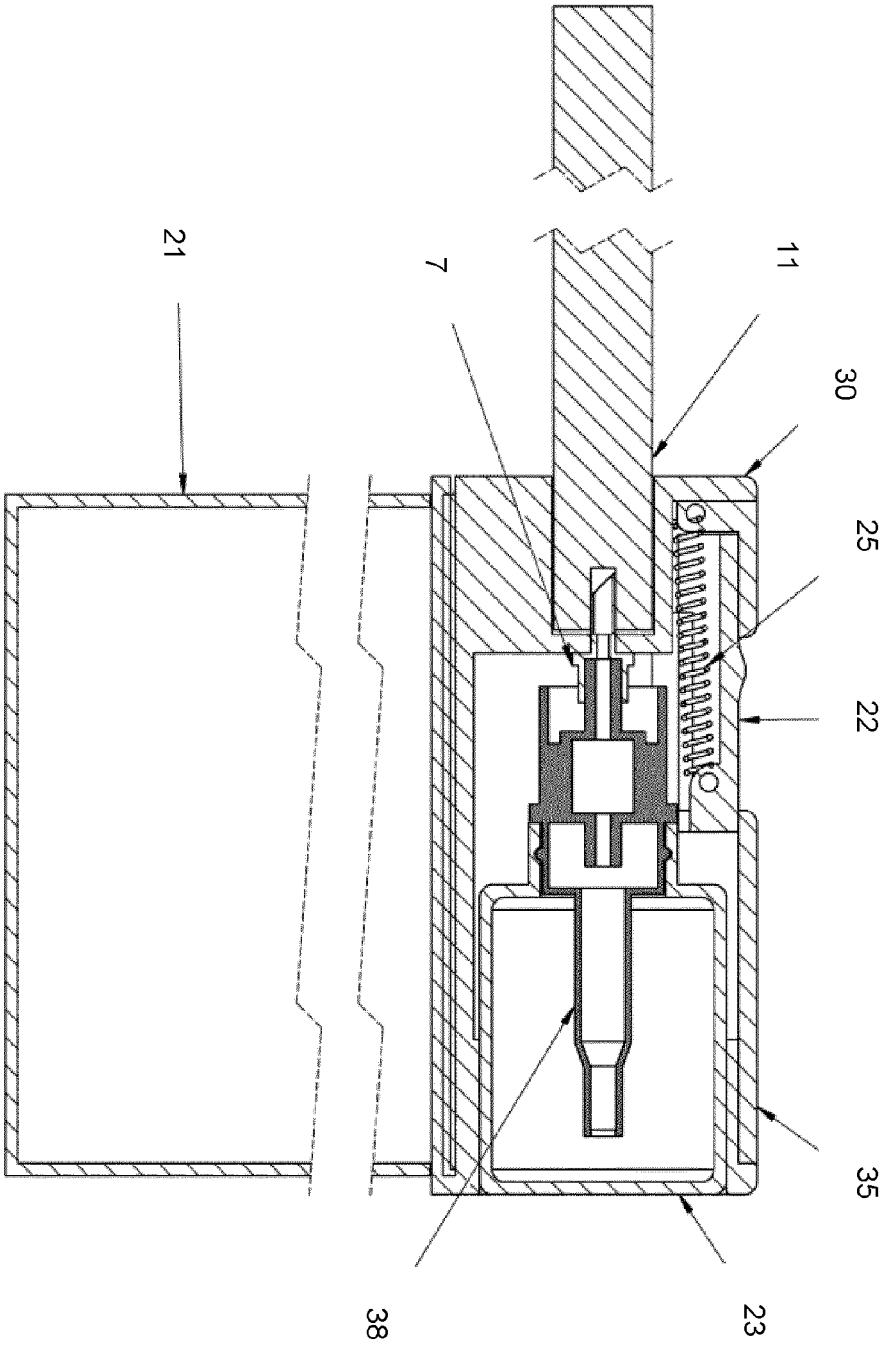

Fig 3

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EUROPEAN SEARCH REPORT

Application Number
EP 11 19 4529

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	8 May 2012	Marzano Monterosso

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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1 EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 11 19 4529

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82