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(71) Applicant: **JT International SA**
1202 Geneva (CH)

(72) Inventors:
- **Johaentges, Thomas**
  54338 Schweich (DE)
- **Diouf, Félicité Maram**
  54290 Trier (DE)
- **Regnery, Lukas**
  54343 Föhren (DE)
- **Diakonov, Aleksei**
  54292 Trier (DE)
- **Weyand-Fischer, Nicole**
  54314 Zerf (DE)
- **Ludes, Irina**
  54296 Trier (DE)

(74) Representative: **BOVARD AG**
Patent- und Markenanwälte
Optingenstrasse 16
3013 Bern (CH)

(54) MANUAL CIGARETTE MAKING DEVICE WITH FLAVOUR APPLICATION

(57) Present invention relates to a manual cigarette making device (100), comprising a housing comprising a first member (10) and a second member (20) that are pivotally connected (55) to each other to be foldable; wherein the second member (20) comprises a stationary tobacco compacting portion (22) and a movable tobacco compacting portion (24), wherein the stationary tobacco compacting portion (22) is connected to the first member (10) while the movable tobacco compacting portion (24) is slidable in relation to the stationary tobacco compacting portion (22); a hollow protruding part (50) mounted externally to an end wall of the stationary tobacco compacting portion (22) to receive the end of a cigarette sleeve (200) to be filled with a charge of tobacco; a tobacco pushing rod and an integral tobacco receiving portion (25) provided to the second member (20), mounted in an axial alignment, wherein at least the integral tobacco receiving portion (25) is capable of longitudinally passing through the hollow protruding part (50) while the movable tobacco compacting portion (24) is slidable in relation to the stationary tobacco compacting portion (22) such that at least the integral tobacco receiving portion (25) is slidable into the cigarette sleeve (200); characterised in that one or more perforations (80) are provided to the first member (10), wherein each of the perforation (80) is capable of introducing a liquid substrate to the charge of tobacco provided to the integral tobacco receiving portion (25). Present invention also relates to a method of manually making cigarette with flavour application using a manual cigarette making device (100).

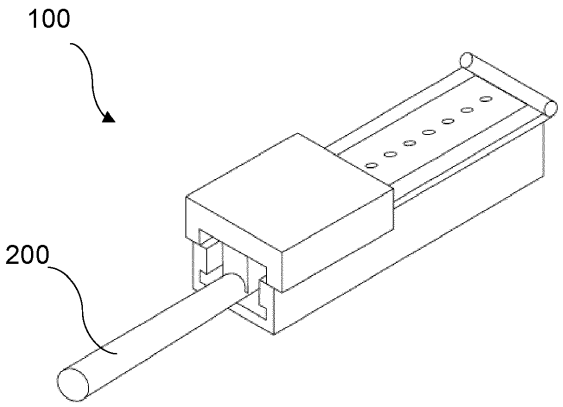

FIGURE 1B

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Description

Technical field of the invention

[0001] The present invention relates to a manual cigarette making device to "make your own" cigarette where shredded tobacco materials are used to be filled into a paper cigarette sleeve or tube through the manual cigarette making device of the present invention to form a densely wrapped, ready-to-use cigarette.

Background of the invention

[0002] A wide range of cigarette products are available in the market where the consumables can be chosen depending on the preferences and needs of an individual. One of the most well accepted types of smoking products is the ready-made cigarettes that are packed and sold in a cigarette pack.

[0003] Nevertheless, some consumers prefer to make their own cigarettes as it allows them to participate in the cigarette making process while other prefer to choose their preferred high-quality tobacco materials. Such "make your own" devices have been known and many manufacturers are selling such devices. Most of these devices have largely similar functions with each other, although their mechanisms may differ slightly from each other. For instance, some manufacturers offer the possibility to make different sizes of cigarettes e.g. king size or queen size cigarettes from the device.

[0004] Although the tobacco materials can be chosen by the consumers according to their preference, consumers may want to adjust flavour in the tobacco material. There is a limited number of premade flavoured tobacco materials, thereby limiting the choice for consumer. Flavour may be directly mixed on the shredded tobacco materials before making the cigarette. However, the outcome is often not optimal.

Summary of the invention

[0005] The inventors of the present invention propose a new device which at least partly overcome the abovementioned problems.

[0006] In a first aspect, it relates to a manual cigarette making device, comprising

a housing comprising a first member and a second member that are pivotally connected to each other to be foldable;

wherein the second member comprises a stationary tobacco compacting portion and a movable tobacco compacting portion, wherein the stationary tobacco compacting portion is connected to the first member while the movable tobacco compacting portion is slidable in relation to the stationary tobacco compacting portion;

a hollow protruding part mounted externally to an end wall of the stationary tobacco compacting portion to receive the end of a cigarette sleeve to be filled with a charge of tobacco;

a tobacco pushing rod and an integral tobacco receiving portion provided to the second member, mounted in an axial alignment, wherein at least the integral tobacco receiving portion is capable of longitudinally passing through the hollow protruding part while the movable tobacco compacting portion is slidable in relation to the stationary tobacco compacting portion such that at least the integral tobacco receiving portion is slidable into the cigarette sleeve;

characterised in that

one or more perforations are provided to the first member, wherein each of the perforation is capable of introducing a liquid substrate to the charge of tobacco provided to the integral tobacco receiving portion.

[0007] In a second aspect, it relates to a method of producing a flavoured cigarette using a manual cigarette making device, comprising the steps of

a. Providing a charge of tobacco to the tobacco receiving portion;

b. Mounting a hollow cigarette tube to the hollow protruding part or before the step (a), wherein step (b) can be performed in any step before the step (e);

c. Folding the pivotally connected first member towards the second member, thereby closing the two members with each other;

d. Applying liquid substance through the one or more perforations provided to the first member such that the liquid substance is in contact with the charge of tobacco provided in the integral tobacco receiving portion;

e. Shifting the charge of tobacco into the hollow cigarette tube so as to form a ready-made cigarette with flavour application.

[0008] The inventors found out that a direct and easy way of applying flavours can be realised through one or more perforations that are provided on the manual cigarette making device. This allows flavoured liquid solution to reach the tobacco materials before the tobacco materials is being filled into the cigarette sleeve. Such perforations allow an even application of flavoured liquid solution throughout the entire length of the cigarette. Alternatively, the flavour application can be controlled and applied only at a certain part of the cigarette. For instance, some consumers may prefer to have a strong tobacco flavour in the first few puffs while some other consumers may prefer to have refreshing flavours such as mint flavour at the end of their smoking. As these perforations are located above the corresponding the integral tobacco receiving portion, the flavoured liquid solution can be precisely introduced in the desired location of the cigarette. For this reason, it may be advantageous to have a plu-

rality of perforations, arranged axially on the device such that the liquid solution can reach charge of tobacco materials in any desired location of the cigarette.

[0009] According to one embodiment, the perforations are holes designated for accepting syringe injection. Such perforations allow acute controlled of liquid solution to be introduced. This is especially advantageous when tiny amount of liquid solution e.g. less than 50 μl are used to apply on the tobacco material.

[0010] According to another embodiment, the perforations or holes are integrated with syringes for the injection of the liquid substance within a cavity of the manual cigarette making device. This allow an easy and quick flavour application.

[0011] In some embodiments, the perforations are provided longitudinally on the first member corresponding to the integral tobacco receiving portion. This allows the liquid solution to reach different location of the cigarette, thus a custom-made flavoured cigarette can be made.

[0012] In some other preferred embodiments, one or more channels connecting the one or more perforations are provided to the first member or to the rectangular shape structure. The one or more channels allows flavouring e.g. liquid substance to flow and be distributed via different perforations.

[0013] In a further variant, at least one perforation is designed to accept syringe injection such that liquid substance via the channel is distributed through other perforations to flavour the charge of tobacco.

[0014] In yet some embodiments, a reservoir is provided at the first member, wherein the liquid solution is introduced into the reservoir through the one or more perforations. This allows that the liquid solution to be stored in the device. The reservoir may comprise a plurality of outlets to allow liquid solution to slowly seep out, reaching the tobacco materials provided at the integral tobacco receiving portion. For instance, the reservoir may be a rectangular shape structure provided underneath of the first member. When the manual cigarette making device is in a closed position, the rectangular shape structure is accepted by an integral tobacco receiving portion that is provided at the second member.

[0015] In yet some embodiments, the reservoir is a cavity or a material that is capable of soaking liquid e.g. a sponge. For instance, the syringe injection applies the liquid solution to the sponge. The liquid solution will subsequently be released from the sponge material to tobacco material.

[0016] According to some preferred embodiments, the perforations have an equal distance from each other. This allows the liquid solution to spread evenly on the cigarette.

[0017] In yet some embodiments, one to ten perforations are provided to the first member. Three to five perforations may be more preferred.

[0018] In some other embodiments, the tobacco pushing rod and the integral tobacco receiving portion are provided to the movable tobacco compacting portion. Tobacco materials applied on the integral tobacco receiving portion can be pushed into the cigarette sleeve when the consumer slide the movable tobacco compacting portion in relation to the stationary tobacco compacting portion.

[0019] By "about" or "approximately" in relation to a given numerical value, it is meant to include numerical values within 10% of the specified value. All values given in the present disclosure are to be understood to be complemented by the word "about", unless it is clear to the contrary from the context.

[0020] The indefinite article "a" or "an" does not exclude a plurality, thus should be treated broadly.

[0021] Unless defined otherwise, technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs.

[0022] A tobacco material can be any compound, mixture, particle matter, material and/or solution that contains and/or carries a constituent of tobacco, either artificially included or naturally contained in tobacco, e.g. tobacco, tobacco particles, tobacco flavor and/or nicotine. In contrast, an example for an artificially added non-tobacco-specific flavor would be menthol or fruit flavour.

Detailed description of the figures

[0023]

Figures 1A and 1B show a perspective view of the manual cigarette making device in a closed position according to an embodiment of the present invention.

Figure 2 show a perspective view of the manual cigarette making device in an open position according to an embodiment of the present invention.

Figure 3 show a perspective view of the manual cigarette making device in a closed position where the movable tobacco compacting portion is slidable in relation to the stationary tobacco compacting portion.

Detailed description of the invention

[0024] Figure 1A shows a schematic perspective view of a manual cigarette making device 100 according to an embodiment of the present invention. The device 100 comprises a rectangular shape which may resemble a paper stapler to some extent. The device 100 is portable as it is made in a palm size.

[0025] The manual cigarette making device 100 comprises a first member 10 and a second member 20 that are pivotably connected 55 where the two members 10, 20 are pivotably foldable to be in an open or a closed position. Longitudinally opposite to the pivoted area 55, a hollow protruding part 50 is provided to an end wall of the second member 20. The hollow protruding part 50

serves to accept a cigarette tube or a cigarette sleeve 200 and it is preferably mounted on the stationary tobacco compacting portion of the device 100 (will be discussed later). A cigarette tube 200 basically appears like a normal cigarette except that tobacco materials are not yet filled within the cigarette tube 200. Usually, the cigarette tube comprises an empty paper tube and a filter attached thereto. Figure 1B shows an example where a cigarette tube 200 is mounted on the hollow protruding part 50 where charge of tobacco materials can be filled into the cigarette.

[0026] As can be seen in both the Figures 1A and 1B, a plurality of perforations 80 are provided on top of the first member 10. The perforations 80 are provided in a vertical position to the first member 10 so that when the manual cigarette making device 100 is in a closed position, the vertically positioned perforations 80 allow liquid solution to be injected into the device, reaching the cavity of the device 100. Therefore, the tobacco content placed within the device 100 can be flavoured through the one or more perforations 80. From the cavity of the device 100, the flavoured liquid solution can slowly reach the tobacco materials that are provided to a specially designed location within the device 100 i.e. integral tobacco receiving portion 25 (will be discussed in Figure 3).

[0027] Figure 2 shows a perspective view of the manual cigarette making device 100 in an open position where the first member 10 and the second member 20 are pivotally 55 connected. A rectangular shape structure 15 is provided to the first member 10. The rectangular shape structure 15 is designed to be accepted by an integral tobacco receiving portion 25 when the first member 10 and the second member 20 are in a closed position. A cavity may be provided within the rectangular shape structure 15 where one face of the rectangular shape structure 15 is corresponding to the vertically arranged perforations 80 so that liquid solution can be injected through the perforations 80, reaching to the cavity of the rectangular bar structure 15. In other words, the rectangular shape structure 15 may have a cavity within, therefore may serve as a reservoir to contain flavoured liquid solution. Moreover, it is foreseen that the rectangular shape structure 15 may have means to allow liquid solution from the cavity to be released from the cavity e.g. a plurality of fine perforations or channels.

[0028] To this end, it is foreseen that the vertical perforations 80 can also penetrate the entire height of the rectangular shape structure 15 such that the liquid solution can be injected directly from the external and reaching the internal content of the device 100 i.e. tobacco materials.

[0029] According to a preferred embodiment, a sponge 17 can also be provided to one surface of the rectangular shape structure 15 so that the liquid solution may be soaked by the sponge 17. It is therefore foreseeable that when the manual cigarette making device is in a closed position, the sponge 17 is in contact with the tobacco material that is provided at the integral tobacco receiving portion 25.

[0030] The manual cigarette making device 100 according to the present invention can be operated for example by firstly placing a charge of tobacco materials into the integral tobacco receiving portion 25. An external tool i.e. a piece of board or a rod may be used to slightly compact the tobacco materials that are being placed in the integral tobacco receiving portion 25. Then, the first member 10 can be brought towards the second member 20 so that the manual cigarette making device 100 is in a closed position.

[0031] Thereafter, flavoured liquid solution can be introduced to the tobacco materials through the perforations 80 provided at the first member 10. A preferred method would be through a syringe injection. Precise amount of flavoured liquid solution can be administered through the perforations 80 to reach either the cavity of the rectangular shape structure 15, sponge 17 or directly in contact with the tobacco materials. The flavoured liquid solution can be applied at different location of the tobacco materials through their corresponding perforations 80. In other words, the flavour application is highly precise and can be performed easily.

[0032] As soon as a hollow cigarette tube 200 is mounted on the hollow protruding part 50, the tobacco material can be loaded into the hollow cigarette tube 200 by sliding the movable tobacco compacting portion 24 in relation to the stationary tobacco compacting portion 22 of the second member 20.

[0033] To this end, it is disclosed that in order to dislocate the tobacco materials from the integral tobacco receiving portion 25 into the cigarette sleeve 200, a half pipe structure can be provided at the bottom of the integral tobacco receiving portion 25 for receiving the charge tobacco materials. At the upstream of the movable tobacco compacting portion 24, a pushing rod may be provided so that when the user slides the movable tobacco compacting portion 24 in relation to the stationary tobacco compacting portion 22, the entire half pipe and the pushing rod (that are provided on the movable tobacco compacting portion 24) are thus moved along with the movable tobacco compacting portion 24.

[0034] When the user slides the movable tobacco compacting portion 24, the entire half pipe and/or at least part of the pushing rod thus protrude outwardly in a longitudinal direction, and they pass through the hollow protruding part 50, reaching the internal cavity of the hollow cigarette tube 200. This allows tobacco materials to be dislocated from the integral tobacco compacting portion 24 to the cigarette tube 200.

[0035] Figure 4 illustrates a further variant of the invention where one or more channels 90 can be provided to the first member 10 or preferably to the rectangular shape structure 15, wherein the channel 90 serves to interconnecting those perforations 80.

[0036] To this end, it is disclosed that the perforations can be designed as input perforations and output perforations. For instance, syringe injection can be connected

with the input perforation(s) and flavouring e.g. liquid flavour and subsequently is distributed and released through one or more output perforations.

[0037] This embodiment allows a quick and easy flavouring injection to the charge of tobacco where flavouring can be distributed simultaneously through the output perforations 80.

[0038] The perforations 80 provided in this present invention allow an easy and quick flavour application to the tobacco materials where the existing devices do not permit such a flavour application. Moreover, the users are allowed to administer their preferred flavourings at their preferred location of the cigarette, and acute volume of flavoured liquid solution can be administered through the use of a syringe.

[0039] It is therefore foreseeable that the syringe can also form an integral part of the manual cigarette making device according to another embodiment of the invention.

[0040] The flavouring may not be provided only in form of a liquid but can also be provided in form a of a gel, foam, mousse, slimy or muddy which has a more viscous consistency than a liquid (e.g. water).

Claims

1. A manual cigarette making device (100), comprising a housing comprising a first member (10) and a second member (20) that are pivotally connected (55) to each other to be foldable;
   wherein the second member (20) comprises a stationary tobacco compacting portion (22) and a movable tobacco compacting portion (24), wherein the stationary tobacco compacting portion (22) is connected to the first member (10) while the movable tobacco compacting portion (24) is slidable in relation to the stationary tobacco compacting portion (22);
   a hollow protruding part (50) mounted externally to an end wall of the stationary tobacco compacting portion (22) to receive the end of a cigarette sleeve (200) to be filled with a charge of tobacco;
   a tobacco pushing rod and an integral tobacco receiving portion (25) provided to the second member (20), mounted in an axial alignment, wherein at least the integral tobacco receiving portion (25) is capable of longitudinally passing through the hollow protruding part (50) while the movable tobacco compacting portion (24) is slidable in relation to the stationary tobacco compacting portion (22) such that at least the integral tobacco receiving portion (25) is slidable into the cigarette sleeve (200);
   characterised in that
   one or more perforations (80) are provided to the first member (10), wherein each of the perforation (80) is capable of introducing a liquid substrate to the charge of tobacco provided to the integral tobacco receiving portion (25).

2. The device (100) according to the claim 1, wherein the perforations (80) are perforations designated for accepting syringe injection.

3. The device (100) according to claim 1 or claim 2, wherein the perforations (80) or holes are integrated with syringes for the injection of the liquid substance within a cavity of the manual cigarette making device (100).

4. The device (100) according to any one of the preceding claims, wherein the perforations (80) are provided longitudinally on the first member (10) corresponding to the integral tobacco receiving portion (25).

5. The device (100) according to any one of the preceding claims, wherein a reservoir is provided at the first member, wherein the liquid solution is introduced into the reservoir through the one or more perforations (80).

6. The device (100) according to any one of the preceding claims, wherein the reservoir is a cavity or a material that is capable of soaking liquid e.g. a sponge.

7. The device (100) according to any one of the preceding claims, wherein the perforations (80) have an equal distance from each other.

8. The device (100) according to any one of the preceding claims, wherein one to ten perforations (80) are provided to the first member.

9. The device (100) according to any one of the preceding claims, wherein the tobacco pushing rod and the integral tobacco receiving portion (25) are provided to the movable tobacco compacting portion (24).

10. The device (100) according to any one of the preceding claims, wherein one or more channels (90) connecting the one or more perforations (80) are provided to the first member or to the rectangular shape structure (15).

11. The device (100) according to claim 10, wherein at least one perforation is designed to accept syringe injection such that liquid substance via the channel (90) is distributed through other perforations to flavour the charge of tobacco.

12. A method of producing a flavoured cigarette using a manual cigarette making device, comprising the steps of

    a. Providing a charge of tobacco to the integral

tobacco receiving portion (25);
b. Mounting a hollow cigarette tube (200) to the hollow protruding part (50), wherein step (b) can be performed in any step before the step (e);
c. Folding the pivotally connected first member (10) towards the second member (20), thereby closing the two members (10, 20) with each other;
d. Applying liquid substance through the one or more perforations (80) provided to the first member (10) such that the liquid substance is in contact with the charge of tobacco provided in the integral tobacco receiving portion (25);
e. Shifting the charge of tobacco into the hollow cigarette tube (200) so as to form a ready-made cigarette with flavour application.

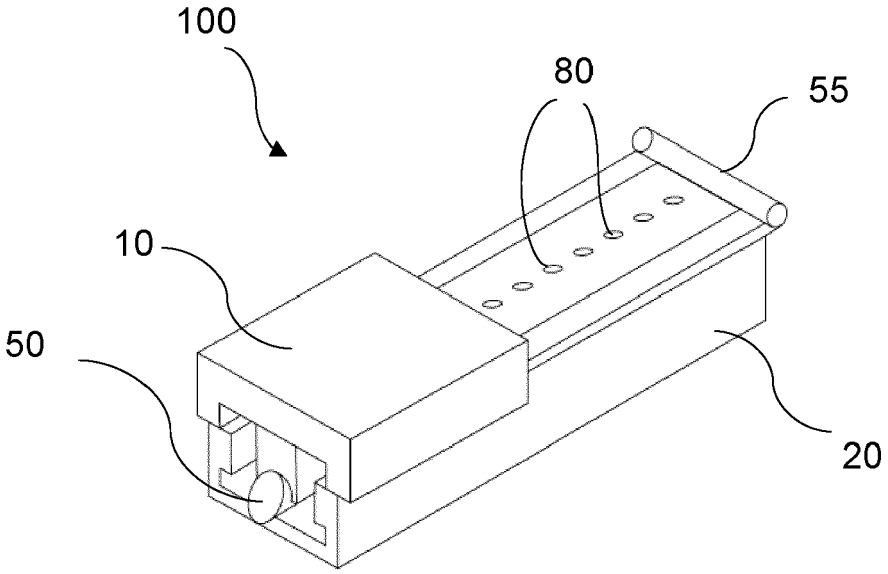

FIGURE 1A

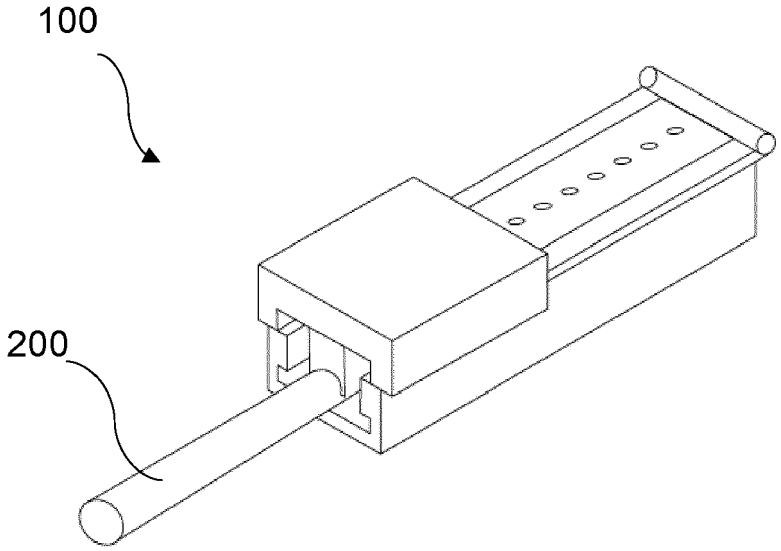

FIGURE 1B

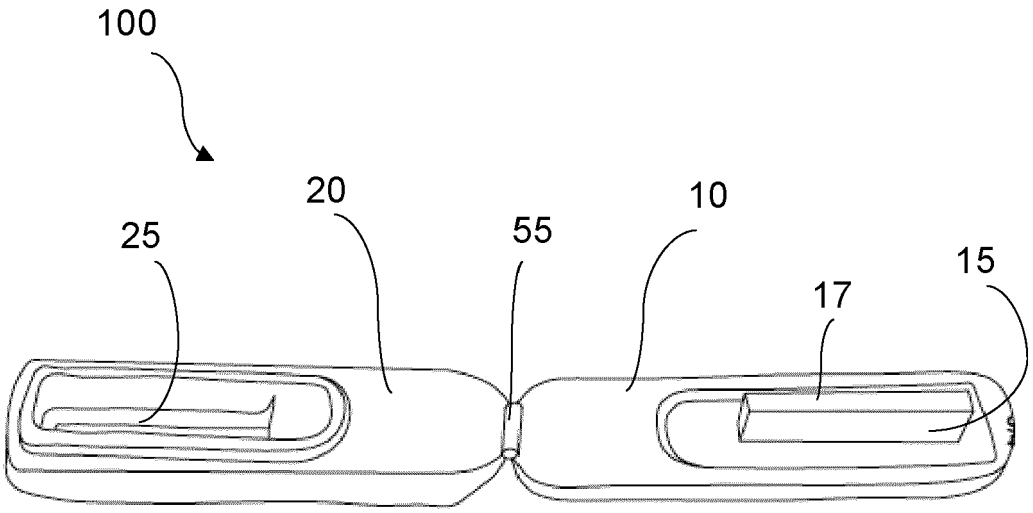

FIGURE 2

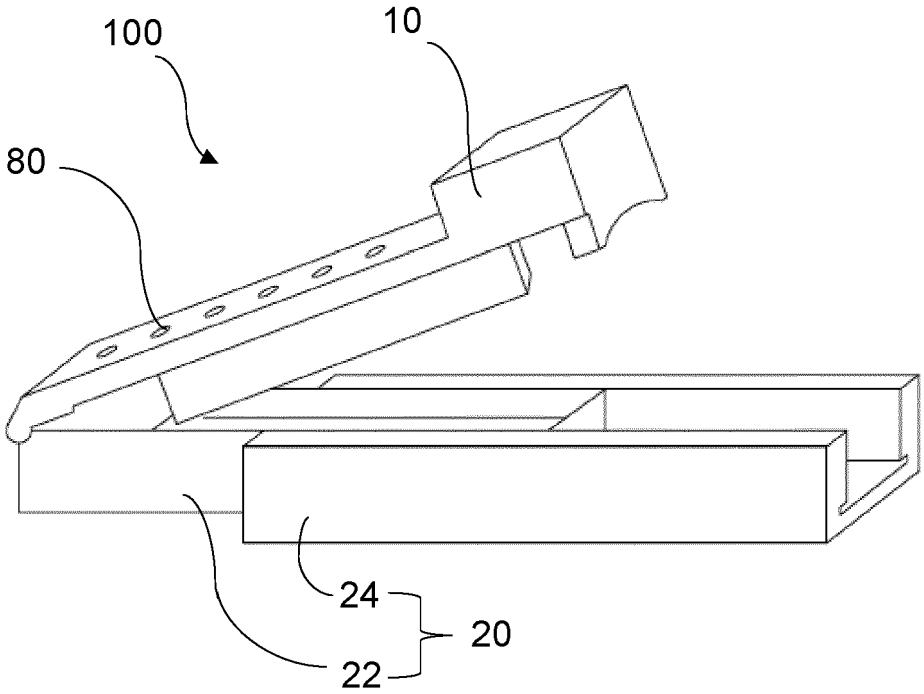

FIGURE 3

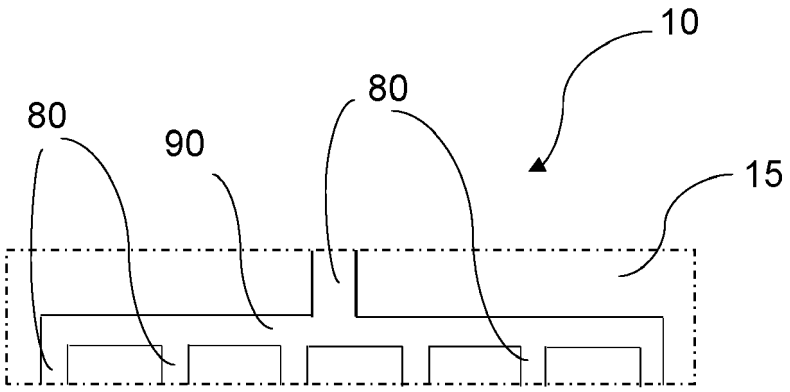

FIGURE 4

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EUROPEAN SEARCH REPORT

Application Number
EP 21 15 1686

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	EP 3 300 615 A2 (REPUBLIC TOBACCO LP [US]) 4 April 2018 (2018-04-04) * paragraph [0028] *	1-12	INV. A24C5/42
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TECHNICAL FIELDS SEARCHED (IPC)
A24C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	5 July 2021	Coniglio, Carlo

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