



(11)

EP 4 079 168 A1

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
26.10.2022 Bulletin 2022/43

(51) International Patent Classification (IPC):
A24F 25/00 ^(2006.01) **A24F 40/30** ^(2020.01)
A24F 40/40 ^(2020.01) **A24F 40/20** ^(2020.01)

(21) Application number: **21170189.1**

(52) Cooperative Patent Classification (CPC):
A24F 40/30; A24F 25/00; A24F 40/40; A24F 40/20

(22) Date of filing: **23.04.2021**

(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
 Designated Validation States:
KH MA MD TN

(71) Applicant: **JT International S.A.**
1202 Geneva (CH)

(72) Inventor: **Lickefeld, Daniel**
54340 RIOL (DE)

(74) Representative: **Lavoix**
2, place d'Estienne d'Orves
75441 Paris Cedex 09 (FR)

(54) **PORTABLE DEVICE FOR FLAVOURING A SHREDDED TOBACCO SUBSTRATE BEFORE USE**

(57) A portable device (1) is intended for flavouring a shredded tobacco substrate (3) and comprises:

- a first compartment (5) configured to receive a shredded tobacco substrate (3),
- a second compartment (6) configured to receive a flavour container (4) comprising a flavouring agent,
- a mixing compartment (7) coupled to the first and second compartments,
- an access control means (8) configured to control accesses between the first compartment (5), second compartment (6) and mixing compartment (7) to allow release of the shredded tobacco substrate (3) and flavouring agent into the mixing compartment (7) so that they mix together to produce a flavoured tobacco substrate (2).

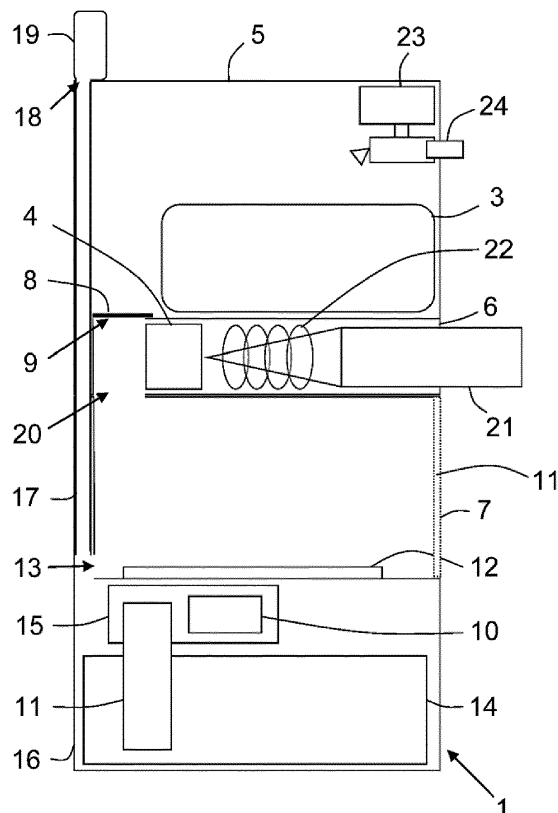


FIG.1

Description

Field of the invention

[0001] The present invention relates to a portable device intended for flavouring shredded tobacco substrates.

Background

[0002] A lot of smokers enjoy preparing their own cigarettes by introducing a shredded tobacco substrate in a paper ready to be rolled manually or by means of a dedicated rolling device.

[0003] Some of these smokers appreciate changing the flavour taste of their tobacco from time to time. So, they need to carry with them several pouches containing respectively tobaccos having different flavour tastes, which is not really convenient.

[0004] So, an object of the present invention is to overcome the above mentioned drawbacks.

Summary of the invention

[0005] The proposed invention provides notably an embodiment of a portable device intended for flavouring a shredded tobacco substrate and comprising a first compartment configured to receive a shredded tobacco substrate.

[0006] This portable device is characterized in that it further comprises:

- a second compartment configured to receive a flavour container comprising a flavouring agent,
- a mixing compartment coupled to these first and second compartments, and
- an access control means configured to control accesses between the first compartment, second compartment and mixing compartment to allow release of the shredded tobacco substrate and flavouring agent into the mixing compartment so that they mix together to produce a flavoured tobacco substrate.

[0007] Such a portable device allows a simple and easy production of a flavoured tobacco substrate ready for use.

[0008] The embodiment of portable device may comprise other aspects or features, considered separately or combined, as defined hereafter.

- In an example of embodiment, the access control means may comprise at least a shutter controlling access of the shredded tobacco substrate to an outlet of the first compartment.
- In another example of embodiment, the portable device may be configured to allow release of the shredded tobacco substrate and flavouring agent into the mixing compartment by gravity;

- In another example of embodiment, the mixing compartment may be adapted to mix the shredded tobacco substrate and flavouring agent when it is shaken by a user.
- In another example of embodiment, the mixing compartment may comprise a first opening allowing a user to retrieve the produced flavoured tobacco substrate.
- In another example of embodiment, the mixing compartment may further comprise a heater configured to heat the flavoured tobacco substrate to generate an aerosol when it is supplied with electrical energy, and an aerosol opening for releasing this generated aerosol. In this case, the portable device may further comprise a power source storing electrical energy and a control device for controlling supply of electrical energy to the heater. For instance, this power source may be a rechargeable battery.
- In the last example of embodiment, the portable device may further comprise a aerosol pipe communicating with the aerosol opening and comprising an outlet for delivering the generated aerosol to a user.
- In another example of embodiment, the first compartment may be located above the second compartment, and the second compartment may be located above the mixing compartment and may communicate at least with the mixing compartment.
- In the last example of embodiment, the first compartment may communicate with the second compartment under control of the access control means.
- In a variant of the last example of embodiment, the first compartment may communicate with the mixing compartment under control of the access control means.
- In another example of embodiment, the second compartment may further comprise a piercing element adapted to pierce the flavour container to release the flavouring agent.
- In another example of embodiment, the first compartment may further comprise a reservoir containing a liquid, and a sprayer coupled to this reservoir and arranged to spray liquid on the shredded tobacco substrate to moisten the latter.
- In another example of embodiment, the first compartment may be detachable from the second compartment.
- In another example of embodiment, the second compartment may further comprise an ejector configured to eject the flavour container.
- In another example of embodiment, the flavour container may be a rigid capsule or a pouch, preferably made of biodegradable or compostable material.
- In another example of embodiment, the first compartment and the mixing compartment may have a storage capacity that allows storage of an amount of shredded tobacco substrate corresponding substantially to a cigarette dose.

Brief description of the figures

[0009] The invention and its advantages will be better understood upon reading the following detailed description, which is given solely by way of non-limiting examples and which is made with reference to the appended drawings, in which :

- Figure 1 (FIG.1) schematically illustrates an example of embodiment of a portable device according to the invention, before the mixing of a shredded tobacco substrate and a flavouring agent, and
- Figure 2 (FIG.2) schematically illustrates the portable device of figure 1 after the mixing of the shredded tobacco substrate and flavouring agent.

Detailed description of embodiments

[0010] The invention aims, notably, at offering a portable device 1 intended, at least, for producing a flavoured tobacco substrate 2 from the mixing of a shredded tobacco substrate 3 and a flavouring agent contained into a container 4.

[0011] As illustrated in figures 1 and 2 a portable device 1, according to the invention, comprises at least a first compartment 5, a second compartment 6, a mixing compartment 7, and an access control means 8.

[0012] The first compartment 5 is configured to receive a shredded tobacco substrate 3. This shredded tobacco substrate 3 is manually introduced by a user into the first compartment 5.

[0013] The second compartment 6 is configured to receive a flavour container 4 comprising a flavouring agent. This flavour container 4 is replaceable by the user of the portable device 1, and can be preferably chosen between several flavour containers 4 containing respectively flavouring agents having different flavours.

[0014] For instance, each flavour container 4 may be a rigid capsule or a pouch (possibly similar to a tea bag), preferably made of biodegradable or compostable material. For instance, a polyhydroxybutyrate (or PHB) material or a styrenic block copolymer (or TPS) material can be used.

[0015] Also for instance, the flavouring agent may be a gas or a liquid.

[0016] Amongst the possible flavours there may be for example menthol, fruity and fudge, etc.

[0017] Also for instance, the second compartment 6 may comprise an opening (not illustrated) that allows the user to retrieve a flavour container 4 that has been used and to introduce a new flavour container 4. Such an opening may be a door that can be locked/unlocked by the user.

[0018] The mixing compartment 7 is coupled (directly or indirectly) to the first 5 and second 6 compartments.

[0019] The access control means 8 is configured to control accesses between the first compartment 5, second compartment 6 and mixing compartment 7 to allow

release of the shredded tobacco substrate 3 and flavouring agent into the mixing compartment 7 so that they mix together to produce a flavoured tobacco substrate 2.

[0020] So, in a first (or close) state of the access control means 8 (illustrated in figure 1) the shredded tobacco substrate 3 and flavouring agent cannot be mixed into the mixing compartment 7, while in a second (or open) state of the access control means 8 (illustrated in figure 2) the shredded tobacco substrate 3 and flavouring agent can be mixed into the mixing compartment 7.

[0021] This allows a simple and easy production of a flavoured tobacco substrate 2 ready for use.

[0022] For instance, and as illustrated in the non-limiting example of figures 1 and 2, the access control means 8 may comprise at least a shutter (or flap) controlling access of the shredded tobacco substrate 3 to an outlet 9 of the first compartment 5.

[0023] This (each) shutter 8 may be manually actuated by the user by means of a dedicated control element (or unit), or else electronically actuated by a control device 10 of the portable device 1 when it receives a user command through a user interface 11.

[0024] Also for instance, the portable device 1 may be configured to allow release of the shredded tobacco substrate 3 and flavouring agent into the mixing compartment 7 by gravity. In this case, once the shutter(s) is (are) in the second (or open) state, the user must hold the portable device 1 in an approximately upright position to allow the shredded tobacco substrate 3 and flavouring agent to fall into the mixing compartment 7.

[0025] Also for instance, the mixing compartment 7 may be adapted to mix the shredded tobacco substrate 3 and flavouring agent when it is shaken (manually) by a user. In other words, once the shredded tobacco substrate 3 and the flavouring agent have fallen into the mixing compartment 7, the user has just to shake the portable device 1 during several seconds (typically between 5 s and 10 s) in order to mix them and then to obtain the flavoured tobacco substrate 2 into the mixing compartment 7.

[0026] Also for instance, the mixing compartment 7 may be made in stainless steel in order to be easily cleaned by the user by means of a suitable brush.

[0027] Also for instance, and as illustrated in the non-limiting example of figures 1 and 2, the mixing compartment 7 may comprise a first opening 11 that allows the user to retrieve the produced flavoured tobacco substrate 2. Such a first opening 11 may be, for instance, a door that is locked during shaking and unlocked by the user when he wants to retrieve the produced flavoured tobacco substrate 2. It is important to note that in this embodiment the portable device 1 is used for producing a flavoured tobacco substrate 2 that the user introduces manually in a paper, after retrieval from the mixing compartment 7, before rolling this paper manually or by means of a dedicated rolling device. In this case, the amount of the flavoured tobacco substrate 2 delivered to the user can correspond substantially to a substrate dose neces-

sary for making a cigarette, according to known techniques "Roll your Own" (or "RYO") and/or "Make your Own" (or "MYO"). In this case, the dimensions of the first compartment 5 can be adapted to receive a predetermined amount of the shredded tobacco substrate 3. In other words, the first compartment 5 can be used as a measuring receptacle allowing the user to obtain the desired dose of flavoured substrate. In some cases, the first compartment 5 can comprise visual indicators allowing the user to vary the amount of the shredded tobacco substrate 3 basing for example on the cigarette dimensions and/or number intended to be obtained.

[0028] In the embodiment illustrated non-limitatively in figures 1 and 2, the portable device 1 may also allow the user to inhale components produced by heating of the flavoured tobacco substrate 2 into the mixing compartment 7.

[0029] In this embodiment, the mixing compartment 7 comprises a heater 12 configured to heat the flavoured tobacco substrate 2 to generate an aerosol when it is supplied with electrical energy, and an aerosol opening 13 for releasing this generated aerosol. Moreover, the portable device 1 comprises a power source 14 storing electrical energy, and the above mentioned control device 10 for controlling supply of electrical energy to the heater 12.

[0030] For instance, this power source 14 may be a rechargeable battery. In this case the portable device 1 may comprise an electrical connector to which a charger cable may be connected during a charging session of the rechargeable battery 14. Such a charger cable may be coupled to an (AC) adapter or to a wall socket. The charger cable and/or the (AC) adapter may belong to the portable device 1.

[0031] Also for instance, the heater 12 may comprise a ceramic plate providing a temperature around 300°C under control of the control device 10 during a vaping session.

[0032] As illustrated in figures 1 and 2, this control device (or controller) 10 may be fixed onto a printed circuit board (or PCB) 15.

[0033] Explicit use of the term "controller" should not be construed to refer exclusively to hardware capable of executing software, and may implicitly include, without limitation, digital signal processor (DSP) hardware, processor, application specific integrated circuit (ASIC), field programmable gate array (FPGA), read only memory (ROM) for storing software, random access memory (RAM), and non volatile storage. Other hardware, conventional and/or custom, may also be included. The functions of the control device (or controller) 10 may be carried out through the operation of program logic, through dedicated logic, through the interaction of program control and dedicated logic, or even manually (by the user). These functions may be provided through the use of dedicated hardware as well as hardware capable of executing software in association with appropriate software.

[0034] The user interface 11 is coupled to the control

device (or controller) 10 and the power source 14 and allows the user to control at least partly the control device (or controller) 10.

[0035] For instance, and as illustrated in the non-limiting example of figures 1 and 2, the user interface 11 may be fixed partly to the printed circuit board 15 to ease and simplify its connections with the control device (or controller) 10. But the user interface 11 may have its own printed circuit board connected to the printed circuit board 15 by wires of flexible circuit(s) in order to be deported anywhere.

[0036] As illustrated, the control device (or controller) 10, user interface 11, power source 14 and mixing compartment 7 may be housed in a first body 16 of the portable device 1, which is coupled to the second compartment 6.

[0037] For instance, the coupling between the first body 16 and the second compartment 6 can be done by screwing by means of two corresponding threaded portions, or by clipping or else by means of magnets.

[0038] In the case where the portable device 1 allows the user to inhale an aerosol, it may also comprise an aerosol pipe 17 communicating with the aerosol opening 13 and comprising an outlet 18 for delivering the generated aerosol to a user. Such an aerosol pipe 17 may be detachable in order to be cleaned. Moreover, this aerosol pipe 17 may be made in stainless steel, for instance. More, and as illustrated in the non-limiting example of figures 1 and 2, the aerosol pipe 17 may be fluidly coupled to a mouthpiece (or mouth end) 19 that is more comfortable for the user than the standard outlet 18 of the aerosol pipe 17. Such a mouthpiece 19 may be detachable, for instance to be cleaned or replaced by a new one.

[0039] Also for instance, and as illustrated in the non-limiting example of figures 1 and 2, the first compartment 5 may be located above the second compartment 6, and the second compartment 6 may be located above the mixing compartment 7 and may communicate at least with the mixing compartment 7 through an outlet 20, possibly under control of the access control means 8.

[0040] With such an arrangement, the first compartment 5 may communicate with the second compartment 6 under control of the access control means 8, as illustrated in the non-limiting example of figures 1 and 2. In this case and as illustrated, the shutter 8 controls the access to the outlet 9 of the first compartment 5 allowing access to the second compartment 6. But in a variant this shutter 8 could control the access to the outlet 20 of the second compartment 6 allowing access to the mixing compartment 7. In another variant (not illustrated), the first compartment 5 could communicate through a pipe (or conduit) with the mixing compartment 7 under control of the access control means 8, while in parallel the second compartment 6 communicates with the mixing compartment 7 through the outlet 20.

[0041] In a first variant of embodiment (not illustrated), the second compartment 6 could be located above the first compartment 5, and the first compartment 5 could

be located above the mixing compartment 7 and could communicate with the second compartment 6, possibly under control of the access control means 8, and with the mixing compartment 7, under control of the access control means 8.

[0042] In a second variant of embodiment (also not illustrated), the first 5 and second 6 compartments could be located at the same level of the portable device 1, and could communicate separately with the mixing compartment 7, possibly under control of the access control means 8.

[0043] Also for instance, and as illustrated in the non-limiting example of figures 1 and 2, the second compartment 6 may comprise a piercing element 21 adapted to pierce the flavour container 4 to define hole(s) allowing to release the flavouring agent.

[0044] This piercing element 21 is manually actuated by the user when he decides to mix shredded tobacco substrate 3 with the flavouring agent. As illustrated, the piercing element 21 may be fitted in the second compartment 6 so that it can slide when it is pushed by the user inside the second compartment 6. Preferably, this piercing element 21 is fitted against an elastic restoring force that allows it to return to its initial position (illustrated in figures 1 and 2) when the user does not push anymore on it. This elastic restoring force may be provided by a return coil spring 22.

[0045] For instance, the piercing element 21 may be made in stainless steel in order to be easily cleaned by the user when it is detachable.

[0046] Also for instance, and as illustrated in the non-limiting example of figures 1 and 2, the first compartment 5 may comprise a reservoir 23 containing a liquid, and a sprayer 24 coupled to this reservoir 23 and arranged to spray liquid on the shredded tobacco substrate 3 to moisten the latter (3) before it is released and mixed. This liquid may be water.

[0047] The sprayer 24 comprises a pump protruding outside the first compartment 5 and that may be manually actuated by the user for example through successive pushes. In a variant (not illustrated) the sprayer 24 may be fully housed into the first compartment 5 and electronically actuated by the control device 10 when it receives a user command through the user interface 11 (or a dedicated command button (or touch)).

[0048] The liquid capacity of the reservoir 23 can be typically equal to 10 ml, for instance. Moreover, the first compartment 5 may comprise an opening that allows the user to retrieve the reservoir 23 in order to refill it, and possibly to clean it. This opening may also offer an access to the first compartment 5 that allows the user to introduce each new shredded tobacco substrate 3. Such an opening may be a door that is locked during shaking and unlocked by the user when he wants to introduce a new shredded tobacco substrate 3 or to refill the reservoir 23.

[0049] For instance, the first compartment 5 may be detachable from the second compartment 6. This may ease introduction of a new shredded tobacco substrate

3 or filling of the reservoir 23. In this case, the coupling between the first 5 and second 6 compartments can be done by screwing by means of two corresponding threaded portions, or by clipping or else by means of magnets, for instance.

[0050] Also for instance, the second compartment 6 may comprise an ejector (not illustrated) configured to eject a flavour container 4 that has been used. This ejector may be manually actuated by the user when he pulls on it, or may be electronically actuated by the control device 10 when it receives a user command through the user interface 11 (or a dedicated command button (or touch)).

[0051] Also for instance, and as mentioned above, the first compartment 5 and the mixing compartment 7 may have a storage capacity that allows storage of an amount of shredded tobacco substrate 3 corresponding substantially to a cigarette dose.

[0052] It should be appreciated by those skilled in the art that some block diagrams of figures 1 and 2 herein represent conceptual views of illustrative circuitry and/or combination of elements embodying the principles of the invention.

[0053] The description and drawings merely illustrate the principles of the invention. It will thus be appreciated that those skilled in the art will be able to devise various arrangements that, although not explicitly described or shown herein, embody the principles of the invention and are included within its spirit and scope. Furthermore, all examples recited herein are principally intended expressly to be only for pedagogical purposes to aid the reader in understanding the principles of the invention and the concepts contributed by the inventor(s) to furthering the art, and are to be construed as being without limitation to such specifically recited examples and conditions. Moreover, all statements herein reciting principles, aspects, and embodiments of the invention, as well as specific examples thereof, are intended to encompass equivalents thereof.

Claims

1. Portable device (1) intended for flavouring a shredded tobacco substrate (3) and comprising a first compartment (5) configured to receive a shredded tobacco substrate (3), wherein it further comprises:

- a second compartment (6) configured to receive a flavour container (4) comprising a flavouring agent,
- a mixing compartment (7) coupled to said first (5) and second (6) compartments, and
- an access control means (8) configured to control accesses between said first compartment (5), second compartment (6) and mixing compartment (7) to allow release of said shredded tobacco substrate (3) and flavouring agent into

- said mixing compartment (7) so that they mix together to produce a flavoured tobacco substrate (2).
2. Portable device according to claim 1, wherein said access control means (8) comprises at least a shutter controlling access of said shredded tobacco substrate (3) to an outlet (9) of said first compartment (5). 5
 3. Portable device according to claim 1 or 2, wherein it is configured to allow release of said shredded tobacco substrate (3) and flavouring agent into said mixing compartment (7) by gravity. 10
 4. Portable device according to any one of the preceding claims, wherein said mixing compartment (7) is adapted to mix said shredded tobacco substrate (3) and flavouring agent when it is shaken by a user. 15
 5. Portable device according to any one of the preceding claims, wherein said mixing compartment (7) comprises a first opening (11) allowing a user to retrieve said produced flavoured tobacco substrate (2). 20
 6. Portable device according to any one of the preceding claims, wherein said mixing compartment (7) further comprises a heater (12) configured to heat said flavoured tobacco substrate (2) to generate an aerosol when it is supplied with electrical energy, and an aerosol opening (13) for releasing said generated aerosol, and wherein it further comprises a power source (14) storing electrical energy and a control device (10) for controlling supply of electrical energy to said heater (12). 25 30
 7. Portable device according to claim 6, wherein it further comprises an aerosol pipe (17) communicating with said aerosol opening (13) and comprising an outlet (18) for delivering said generated aerosol to a user. 35 40
 8. Portable device according to any one of the preceding claims, wherein said first compartment (5) is located above said second compartment (6), and said second compartment (6) is located above said mixing compartment (7) and communicates at least with said mixing compartment (7). 45
 9. Portable device according to claim 8, wherein said first compartment (5) communicates with said second compartment (6) under control of said access control means (8). 50
 10. Portable device according to claim 8, wherein said first compartment (5) communicates with said mixing compartment (7) under control of said access control means (8). 55
 11. Portable device according to any one of the preceding claims, wherein said second compartment (6) further comprises a piercing element (21) adapted to pierce said flavour container (4) to release said flavouring agent.
 12. Portable device according to any one of the preceding claims, wherein said first compartment (5) further comprises a reservoir (23) containing a liquid, and a sprayer (24) coupled to said reservoir (23) and arranged to spray liquid on said shredded tobacco substrate (3) to moisten the latter.
 13. Portable device according to any one of the preceding claims, wherein said first compartment (5) is detachable from said second compartment (6).
 14. Portable device according to any one of the preceding claims, wherein said second compartment (6) further comprises an ejector configured to eject said flavour container (4).
 15. Portable device according to any one of the preceding claims, wherein said flavour container (4) is a rigid capsule or a pouch.

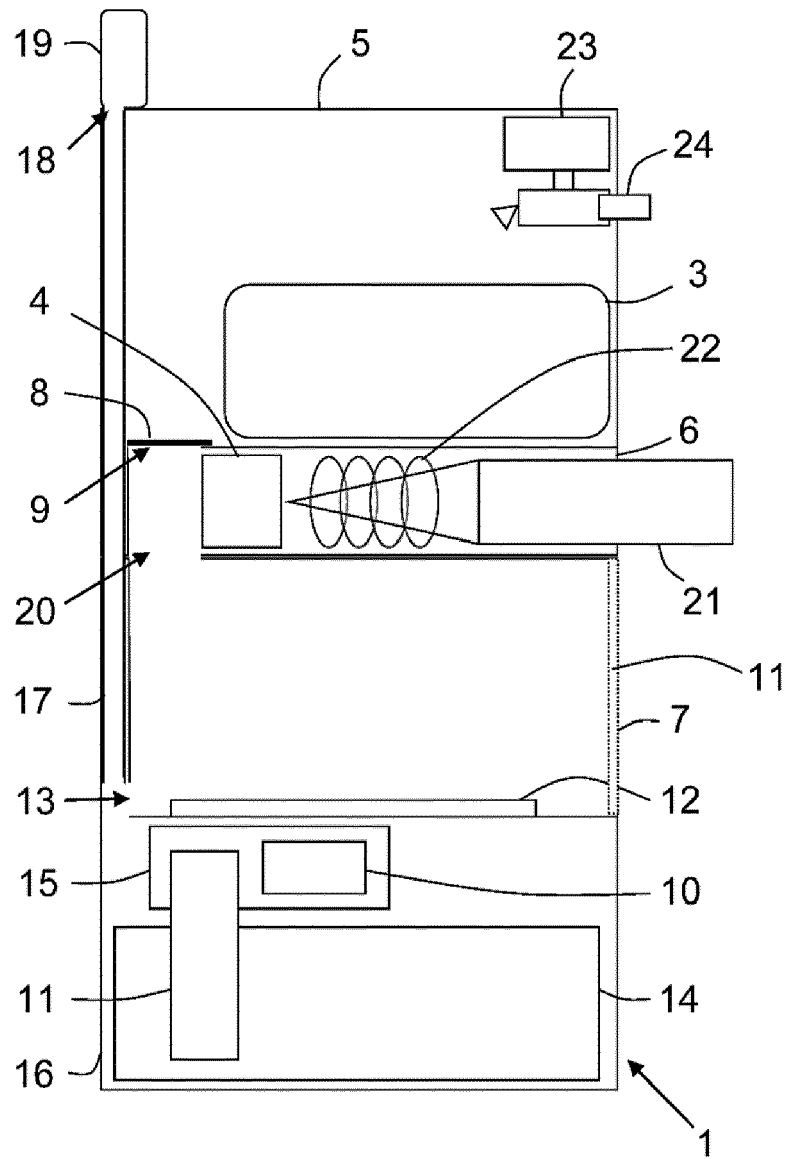


FIG.1

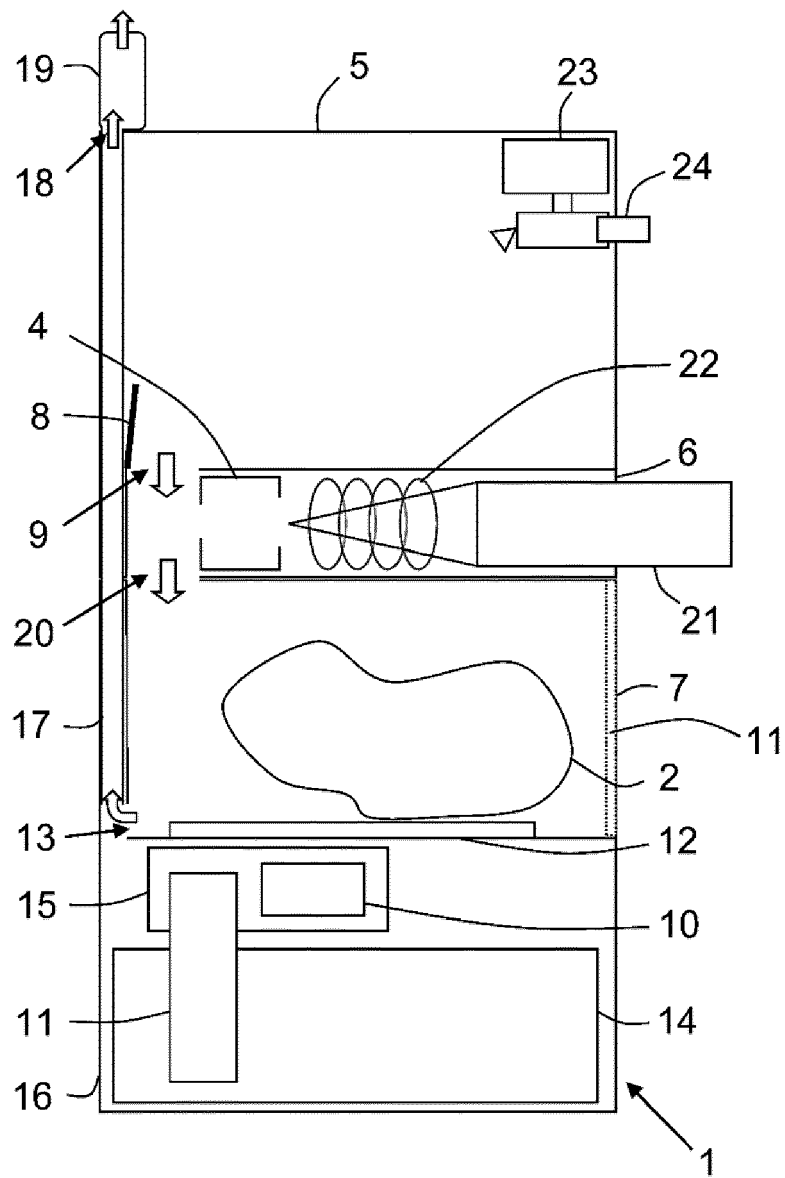


FIG.2



EUROPEAN SEARCH REPORT

Application Number
EP 21 17 0189

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	US 2012/305418 A1 (D AVILA ARTHUR PACHECO [BR]) 6 December 2012 (2012-12-06) * paragraphs [0002], [0034], [0037]; figures 1-3 *	1-15	INV. A24F25/00 A24F40/30 A24F40/40
A	US 2016/073680 A1 (RUSHFORTH DAVID [GB] ET AL) 17 March 2016 (2016-03-17) * paragraphs [0055], [0056], [0062], [0066], [0092]; figures 3, 8-11 *	1-15	ADD. A24F40/20
A	US 2015/013693 A1 (FUISZ RICHARD C [US] ET AL) 15 January 2015 (2015-01-15) * paragraphs [0011], [0058] - [0065], [0070]; figures 1-3 *	1-15	
A	WO 2018/087165 A1 (BRITISH AMERICAN TOBACCO INVESTMENTS LTD [GB]) 17 May 2018 (2018-05-17) * page 36, line 14 - page 37, line 23; figure 5 *	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			A24F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 29 October 2021	Examiner Schwarzer, Bernd
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

 1
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 21 17 0189

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

29-10-2021

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2012305418 A1	06-12-2012	AR 079058 A1	21-12-2011
		AU 2010321058 A1	31-05-2012
		BR PI0904550 A2	12-07-2011
		BR 112012011939 A2	10-05-2016
		CA 2778507 A1	26-05-2011
		CN 102753455 A	24-10-2012
		EP 2501630 A1	26-09-2012
		JP 2013511444 A	04-04-2013
		KR 20120127402 A	21-11-2012
		RU 2012125153 A	27-12-2013
		US 2012305418 A1	06-12-2012
		WO 2011061130 A1	26-05-2011
US 2016073680 A1	17-03-2016	ZA 201203252 B	29-10-2014
		DK 2986532 T3	01-04-2019
		EP 2986532 A2	24-02-2016
		GB 2513164 A	22-10-2014
		JP 6125717 B2	10-05-2017
		JP 2016522680 A	04-08-2016
US 2015013693 A1	15-01-2015	US 2015013693 A1	15-01-2015
		WO 2015006187 A1	15-01-2015
WO 2018087165 A1	17-05-2018	AU 2017358571 A1	23-05-2019
		AU 2020203586 A1	25-06-2020
		BR 112019009557 A2	06-08-2019
		CA 3043248 A1	17-05-2018
		CL 2019001245 A1	09-08-2019
		CN 109922674 A	21-06-2019
		EP 3537900 A1	18-09-2019
		JP 6927503 B2	01-09-2021
		JP 2019534022 A	28-11-2019
		KR 20190058656 A	29-05-2019
		NZ 752979 A	30-10-2020
		PH 12019500981 A1	20-01-2020
		RU 2733079 C1	29-09-2020
		RU 2020123502 A	25-08-2020
		US 2019357590 A1	28-11-2019
		WO 2018087165 A1	17-05-2018

EPO FORM P0459

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