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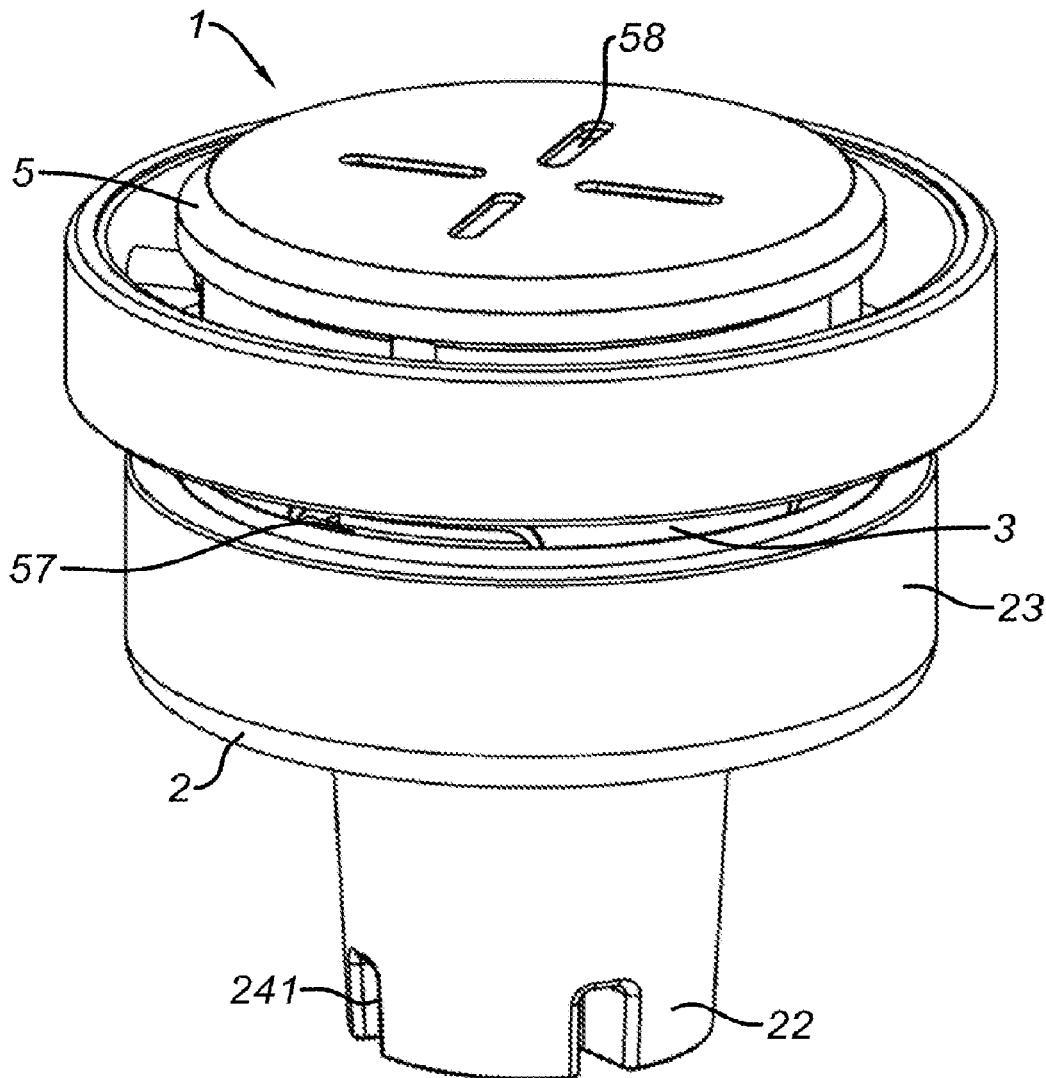
(19) **United States**(12) **Patent Application Publication**
NGUYEN et al.(10) **Pub. No.: US 2019/0364960 A1**(43) **Pub. Date: Dec. 5, 2019**(54) **IMPROVED SHISHA OR HOOKAH****Publication Classification**(71) Applicants: **Thang NGUYEN**, Villejuif (FR);
Mohamed Belaïd Amine BENSALAH,
Saint Leu la Foret (FR)(51) **Int. Cl.**
A24F 1/30 (2006.01)(52) **U.S. Cl.**
CPC **A24F 1/30** (2013.01)(72) Inventors: **Thang NGUYEN**, Villejuif (FR);
Mohamed Belaïd Amine BENSALAH,
Saint Leu la Foret (FR)(57) **ABSTRACT**(21) Appl. No.: **16/472,442**(22) PCT Filed: **Dec. 21, 2017**(86) PCT No.: **PCT/FR2017/053802**

§ 371 (c)(1),

(2) Date: **Jun. 21, 2019**(30) **Foreign Application Priority Data**

Dec. 21, 2016 (FR) 16/63057

Device for generating smoke for a hookah, including a tray and a bowl, the tray being shaped for placement at the top of a hookah stem and including a receptacle suitable for receiving a smoking mixture, the bowl being shaped for arrangement at the top of the tray above the mixture, being suitable for receiving a heating element and including a base suitable for supporting the heating element and for imparting its heat to the mixture, and a cover closing up the bowl, the device being shaped to allow circulation of fluid from the bowl to the receptacle, the circulation including at least one baffle.



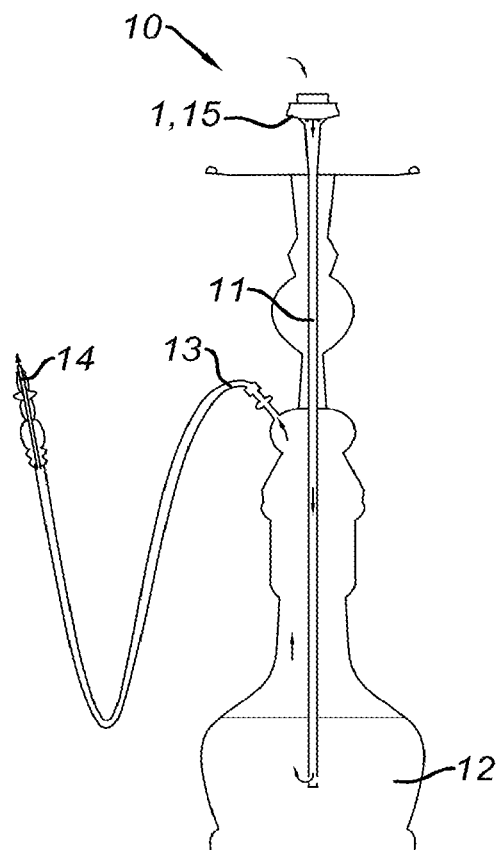


Fig. 1

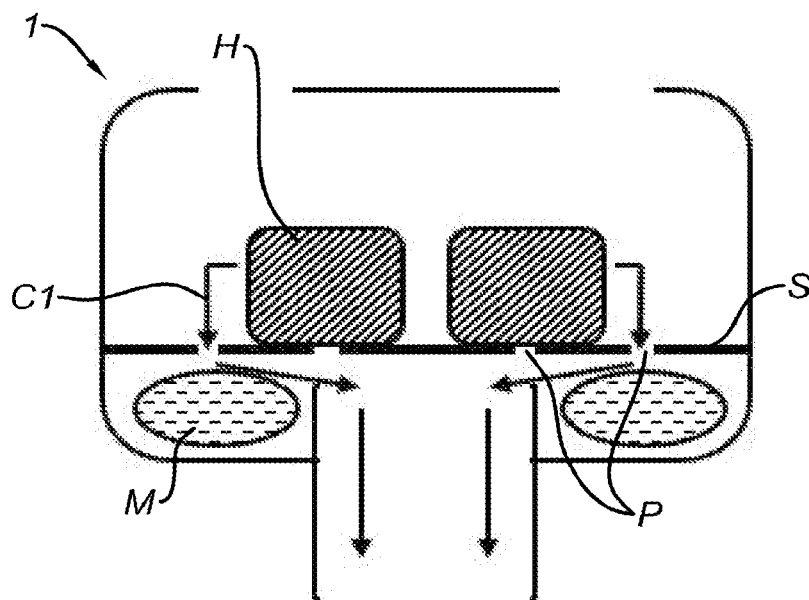


Fig. 2 Prior Art

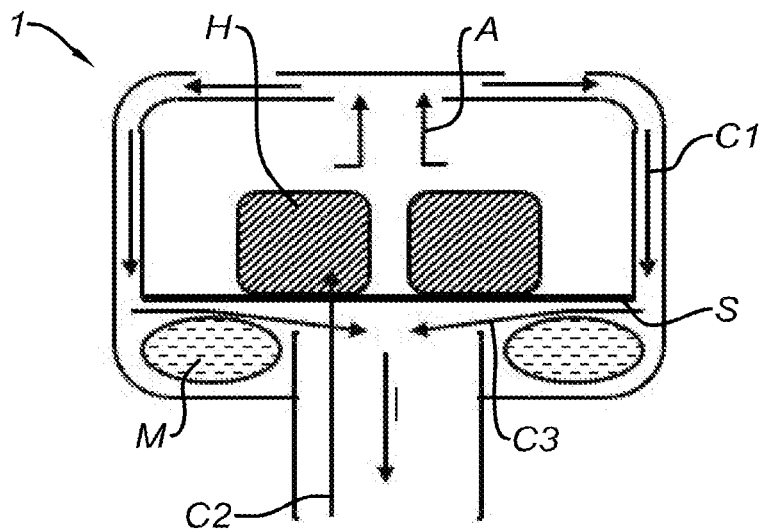


Fig. 3

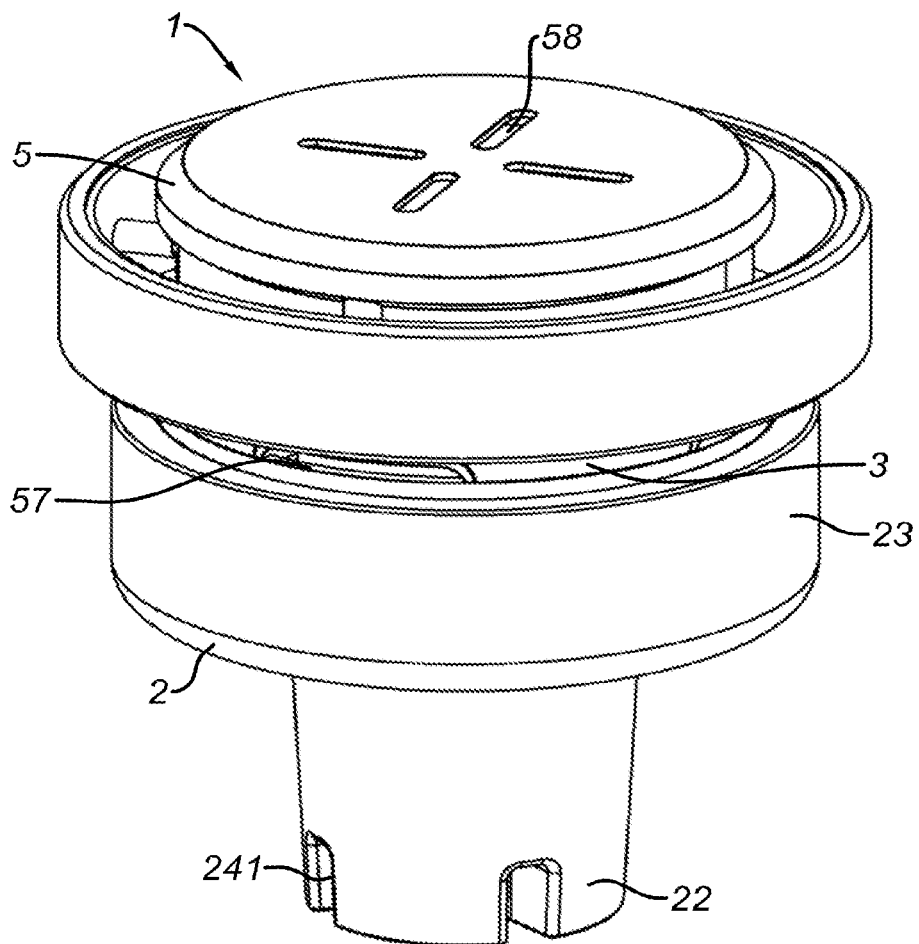


Fig. 4

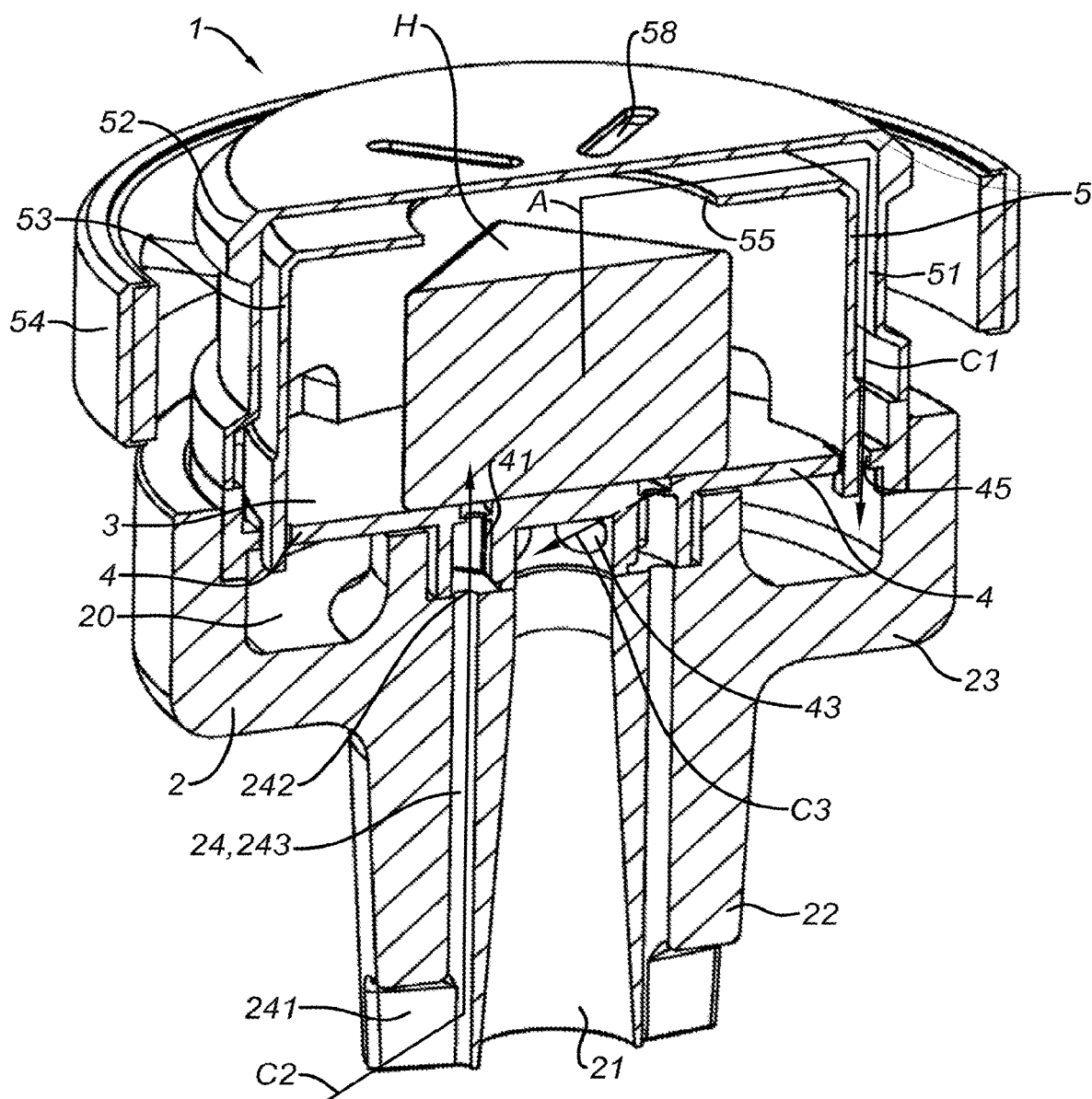


Fig. 5

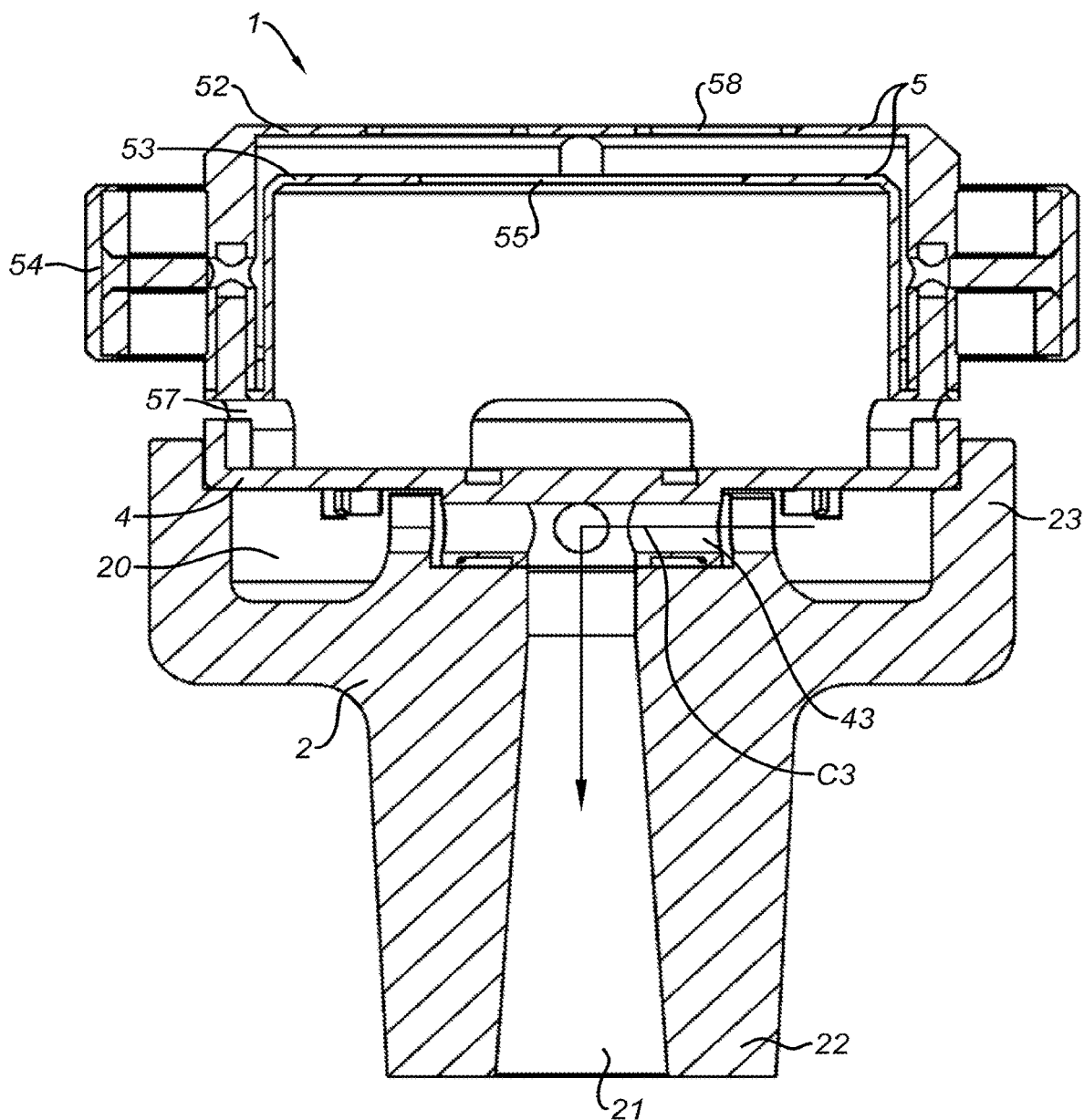


Fig. 6

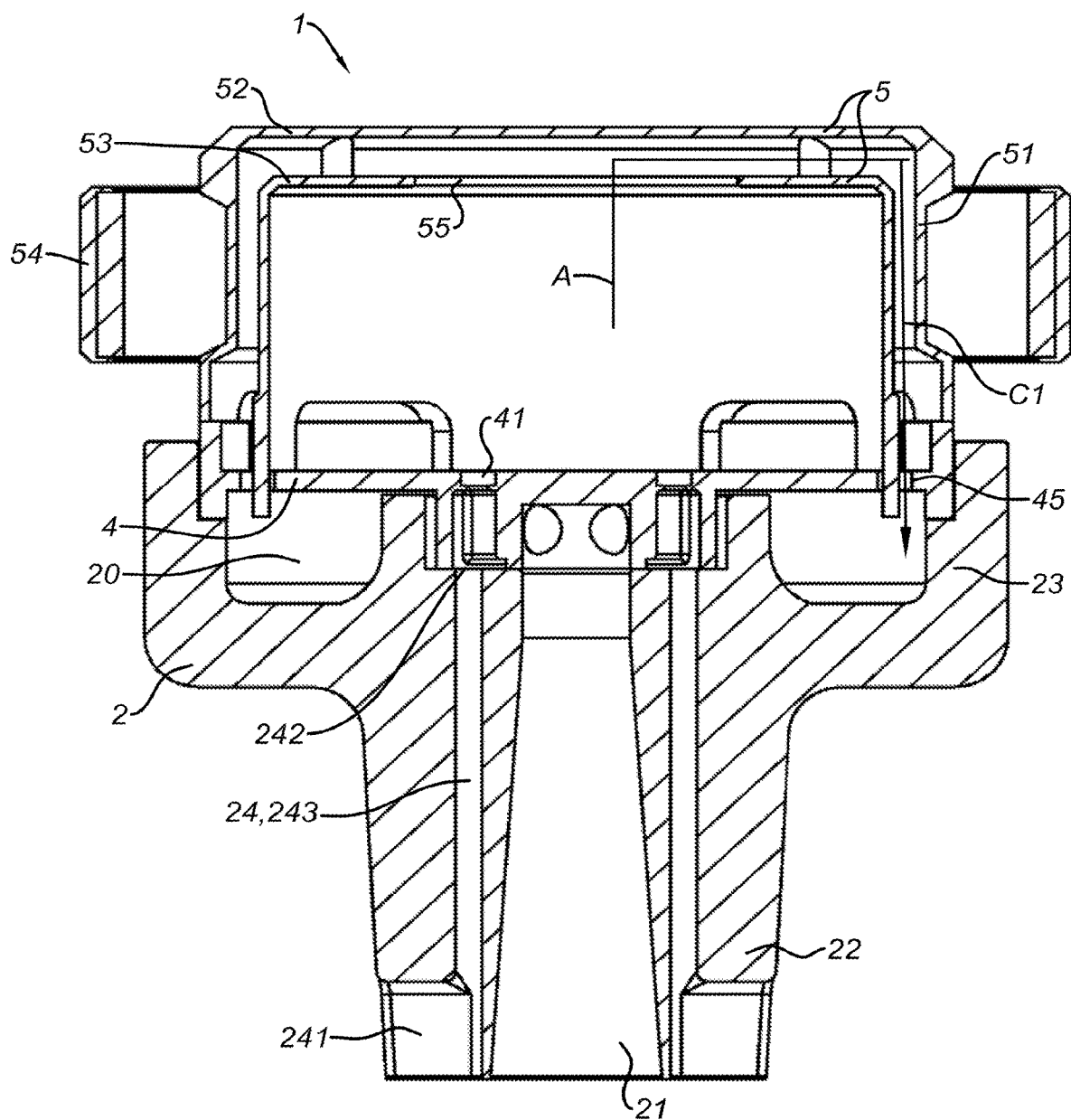


Fig. 7

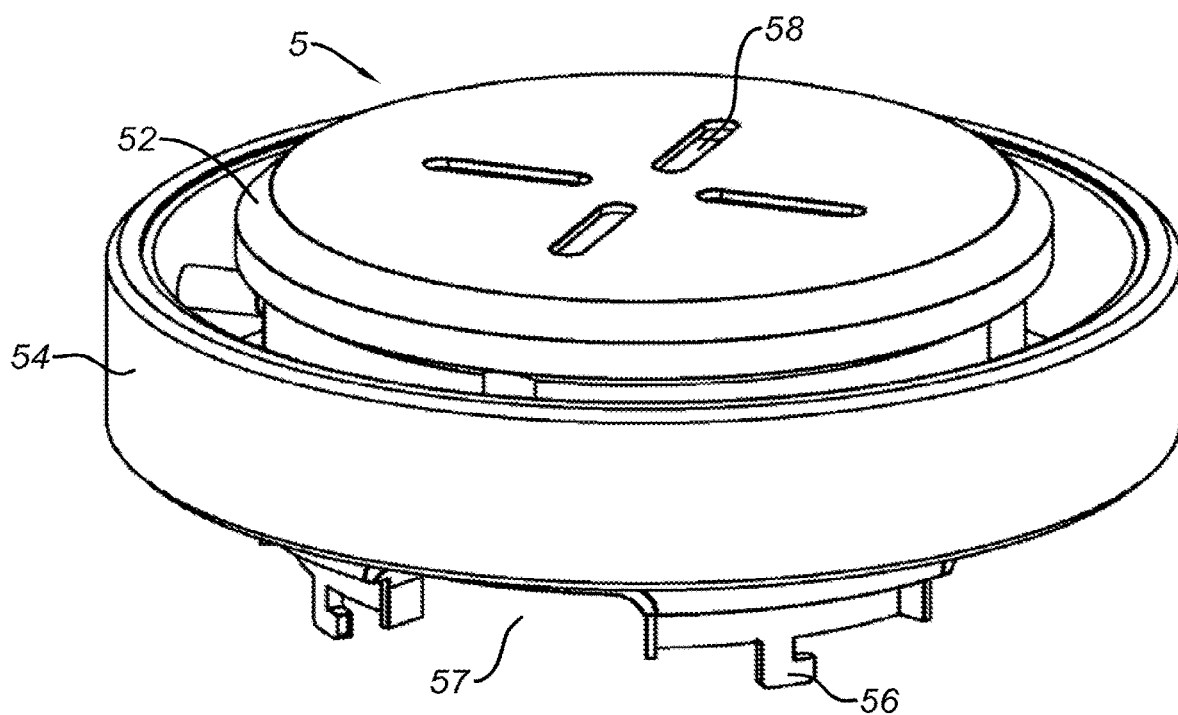


Fig. 8

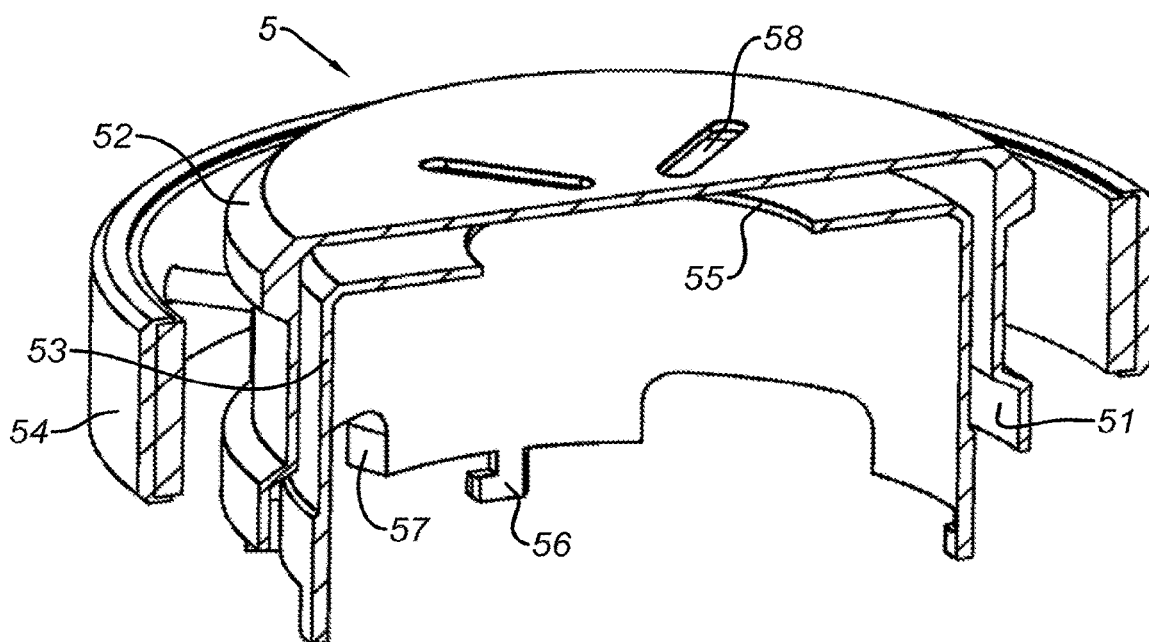


Fig. 9

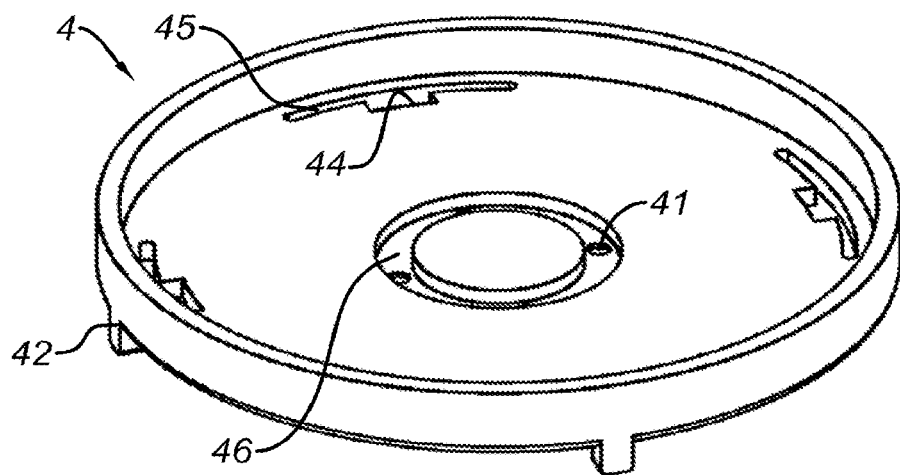


Fig. 10

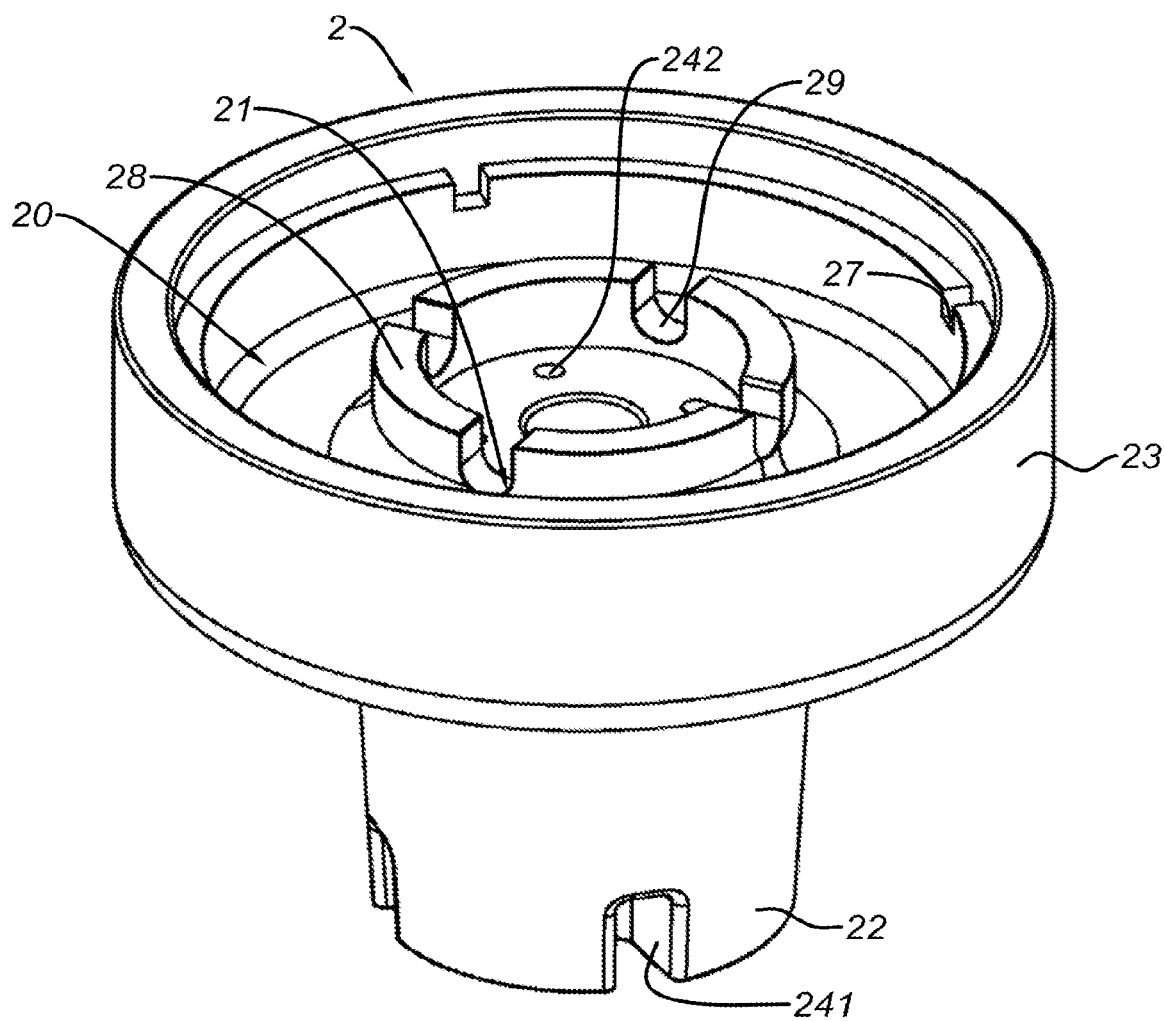


Fig. 11

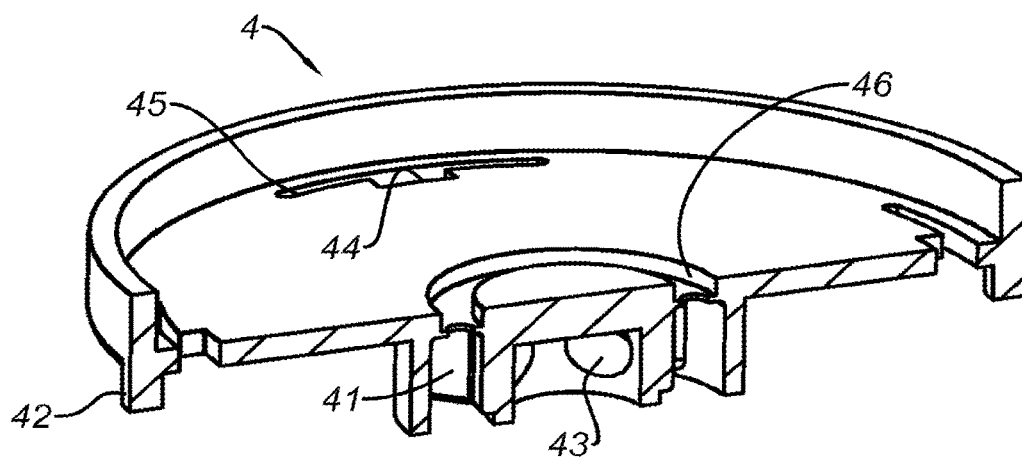


Fig. 12

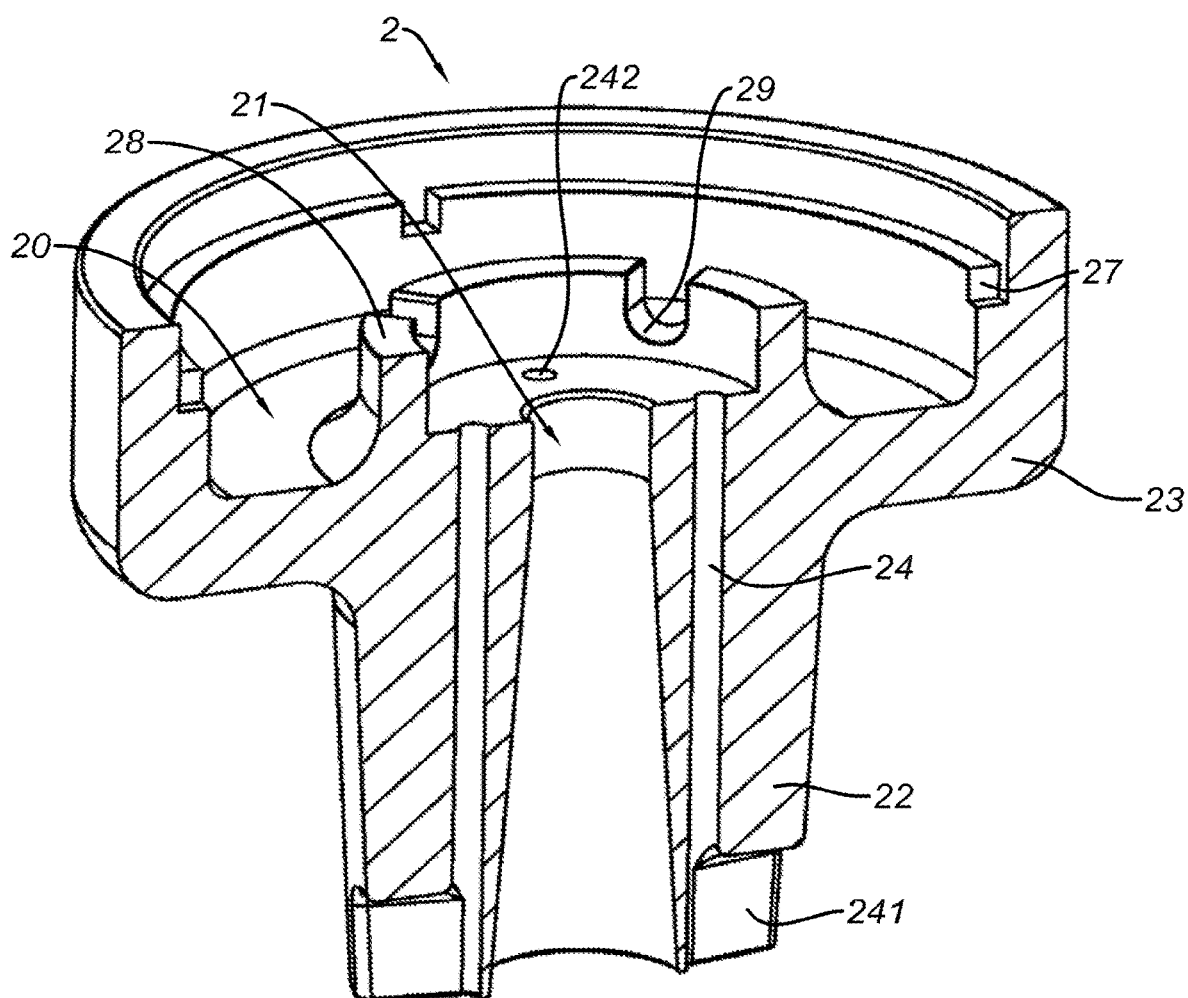


Fig. 13

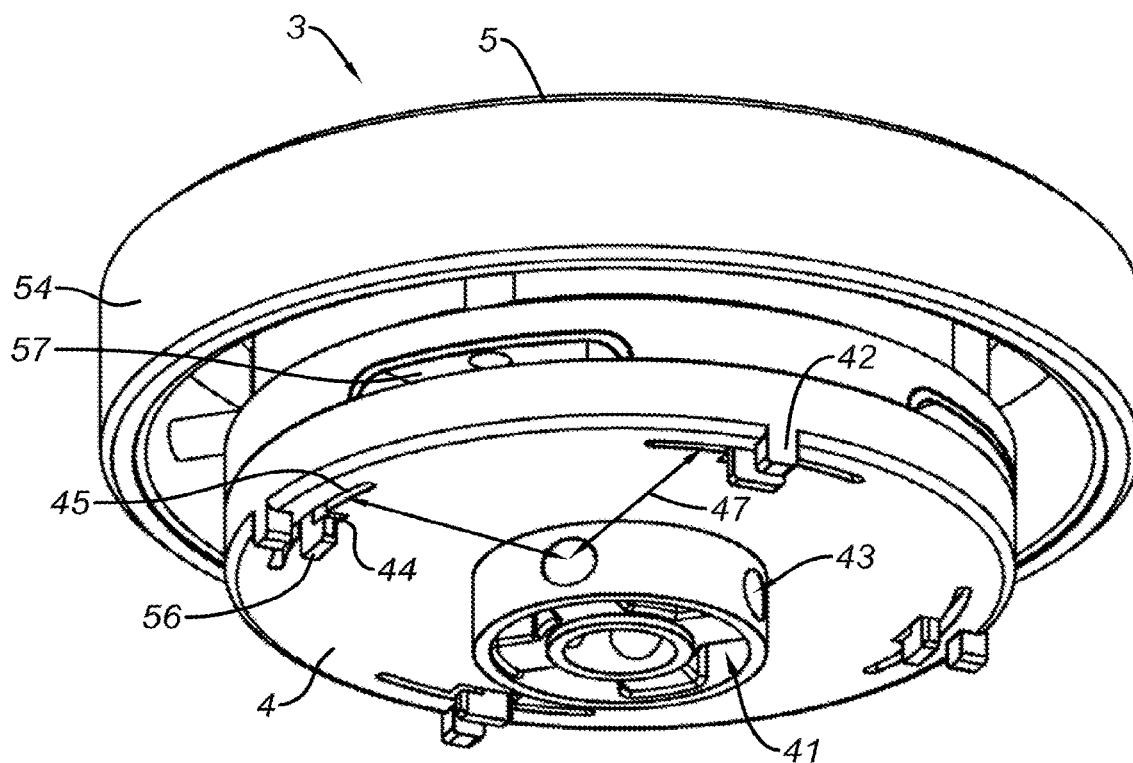


Fig. 14

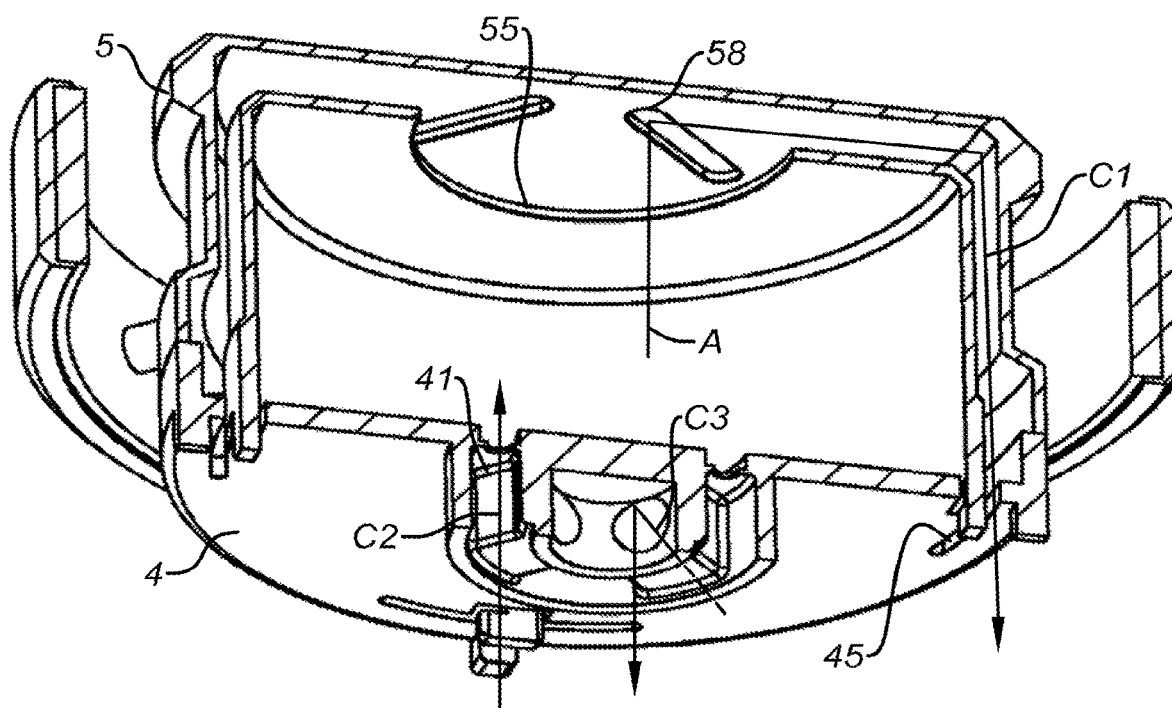


Fig. 15

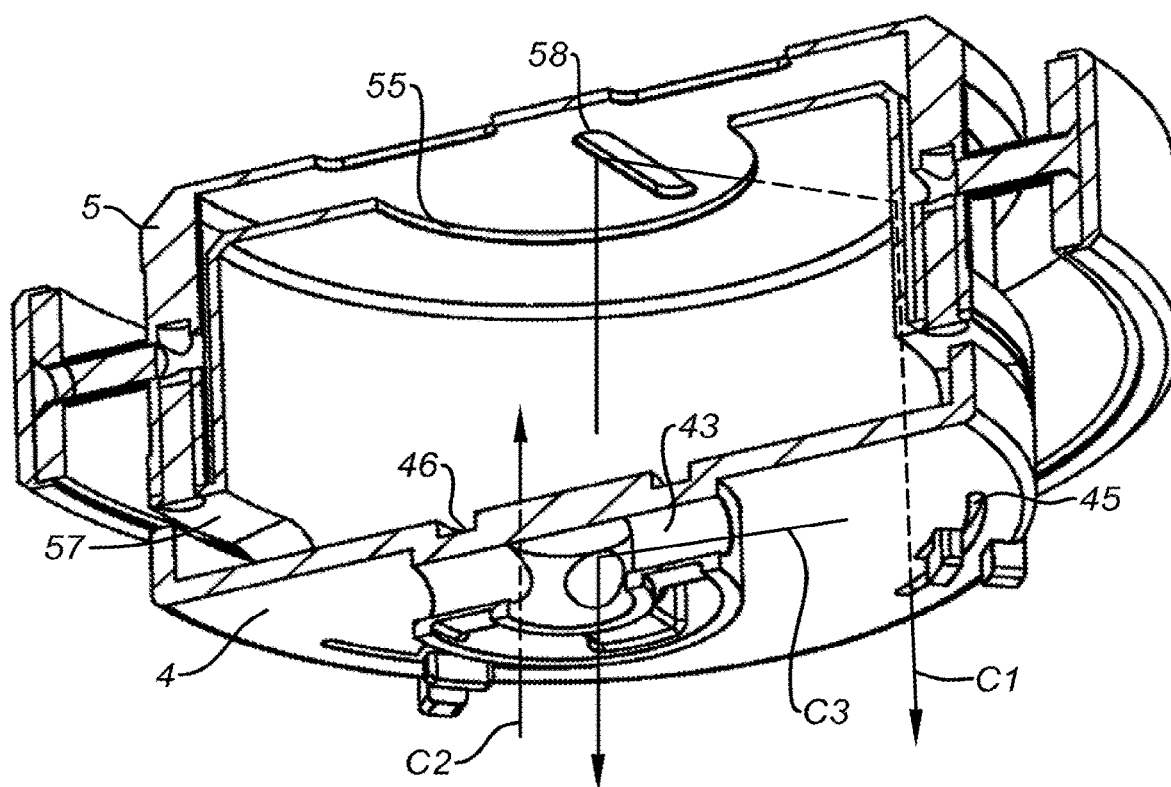


Fig. 16

IMPROVED SHISHA OR HOOKAH

[0001] The present invention concerns a smoke generator for a hookah.

[0002] As illustrated in FIG. 1 and in a known manner, a hookah 10, also called chicha, shisha, nurgil, ghelyan, arguileh, houka, chilam, gelyoun, hubble-bubble, qalyan or water pipe, is a pipe allowing smoking a smoking mixture. The mixture, sometimes referred to as tabamel, may comprise tobacco, molasses, fruit essences, smoking gel, smoking stones or other components. The hookah 10 comprises, at its head 15, a smoke generator 1 adapted to produce a smoke. This device 1 is disposed above a vertical chimney 11 ensuring the conveyance of the smoke, up to a vase 12 containing a liquid, typically water, which may comprise perfumes, colorants, fruits, ice cubes, etc. By passing through the liquid, the smoke is advantageously refreshed and filtered. Afterwards, the smoke passes through at least one flexible hose 13 up to a tip 14 used by the smoker to inhale the smoke.

[0003] The hookah has been used since its invention more than 450 years ago in India according to a first version and more than 700 years ago in Africa according to another version, traditionally in Africa, South Asia and the Middle East. Its use today extends to much wider horizons. The number of hookah smokers is estimated to more than 100 millions around the world.

[0004] As illustrated by the block diagram of FIG. 2, a smoke generator 1 produces smoke by combustion of the mixture M, previously disposed, in a receptacle formed to this end in the smoke generator 1. The combustion is produced by a heater element H received in the smoke generator 1 and disposed above the mixture M. The heater element H is traditionally a combustible element, such as coal. In order to avoid a too quick combustion, the contact between the heater element H and the mixture M is generally performed throughout a heat shield S. The heater element H communicates its heat to the mixture M, on the one hand, by contact and, on the other hand, by means of a first fluid circulation C1 between the heater element H and the mixture M. The term «fluid» hereby mainly means air, which may be loaded with smoke from the combustion of the heater element H or with smoke from the mixture M.

[0005] Traditionally, a sheet of aluminum foil is used as a shield S. This sheet of aluminum foil is pierced with holes P in order to enable the first fluid circulation C1.

[0006] According to WO 2013/184847, a rigid aluminum plate is used as a shield S and replaces the aluminum foil. This aluminum plate is pierced with holes P to enable the fluid circulation C1.

[0007] In order to enable the fluid circulation C1 between the heater element H and the mixture M, the smoke generators 1 of the prior art systematically have piercings P throughout the shield S. These shortest piercings are direct. However, they also allow coal ashes and/or lumps of coal to pass through the shield S and contaminate the mixture M. The arrangement of the heater element H, necessarily above the mixture M, causes said piercings P to descend vertically. Also the migration of the coal ashes and/or lumps of coal is facilitated by gravity. The presence of ashes or coal in the mixture M causes an unpleasant taste which degrades the smoker's experience.

[0008] There is therefore a need to provide a smoke generator for a hookah which prevents or at least limits the migration of ash or coal, in order to prevent the contami-

nation of the mixture. The present invention overcomes this drawback and provides many additional advantages allowing improving the smoker's experience.

[0009] To this end, according to a first aspect, the invention relates to a smoke generator device for a hookah, comprising a bowl and a hearth, the bowl being shaped so as to take place at the top of a hookah chimney and including a receptacle adapted to receive a smoking mixture, the hearth being shaped so as to be disposed at the top of the bowl above the mixture, being adapted to receive a heater element and comprising a base, adapted to support the heater element and to communicate its heat to the mixture, and a cover enclosing the hearth, the device being shaped so as to enable a first fluid circulation from the hearth to the receptacle, the first circulation including at least one baffle.

[0010] This advantageously allows that the ashes or combustible debris do not leave the hearth to contaminate the smoking mixture.

[0011] According to other features of the invention, the smoke generator of the invention includes one or more of the following optional features considered alone or according to any possible combination:

[0012] the first circulation is shaped so as to comprise at least one ascending section,

[0013] the cover comprises at least one first channel formed across its thickness adapted to enable the first circulation,

[0014] the cover is made of a good heat-conducting material, preferably a light alloy, such as aluminum, and the first channel has a length of at least 1 cm, preferably at least 3 cm,

[0015] the device is further shaped so as to enable a substantially central air inlet into the hearth from the bottom.

[0016] the bowl substantially has a shape of revolution, and further comprises a through central chimney, a lower portion shaped so as to enable an assembly at the top of the chimney of the hookah, an upper portion comprising the receptacle and shaped so as to receive the hearth, and at least one second channel connecting a preferably radial and peripheral inlet formed in the lower portion to a substantially axial and central outlet formed in the upper portion by means of a conduit substantially parallel to the central chimney, and the base comprises at least one via, facing each outlet,

[0017] the cover further comprises at least two walls,

[0018] the cover further comprises a handle made of a heat-insulating material, preferably of silicone, preferably in the form of a peripheral ring,

[0019] the cover and the base comprise complementary interlocking means,

[0020] the base and the bowl are shaped so as to be assembled in a tight manner,

[0021] the base and the bowl comprise complementary rotational indexing means,

[0022] the bowl further comprises a wall separating the receptacle from the chimney, comprising at least one opening enabling the passage of a fluid from the receptacle to the chimney,

[0023] the bowl or the base further comprises at least one substantially horizontal third channel adapted to connect the receptacle to the chimney, disposed, where appropriate, in said at least one opening and sealed with respect to said at least one second channel,

[0024] said at least one third channel is angularly offset relative to said at least one second channel,

[0025] said at least one first channel is angularly offset relative to said at least one third channel, in order to maximize the path length of the fluid in the receptacle,

[0026] the cover further comprises at least one side vent, preferably at the lower portion, angularly offset relative to said at least one first channel, and at least one upper vent, preferably at the top of the cover.

[0027] The invention will be better understood on reading the following non-limiting description, with reference to the appended figures.

[0028] FIG. 1, already described, shows a hookah, in combination with which the invention can be implemented,

[0029] FIG. 2, already described, shows the principle of fluid circulations according to the prior art,

[0030] FIG. 3 shows the principle of fluid circulations according to the invention;

[0031] FIG. 4 shows an embodiment of the device according to the invention in perspective view, from a first high-angle viewpoint;

[0032] FIG. 5 shows the device of FIG. 4, in a cut-away perspective view, from the first viewpoint,

[0033] FIG. 6 shows the same device, in a cut-away view in a first direction perpendicular to the axis of the chimney,

[0034] FIG. 7 shows the same device, in a cut-away view in a second direction perpendicular to the axis of the chimney, rotated by 45° about the axis of the chimney relative to the first direction,

[0035] FIG. 8 shows a cover of the same device, in a perspective view, from the first viewpoint.

[0036] FIG. 9 shows the cover of FIG. 8, in a cut-away perspective view, from the first viewpoint,

[0037] FIG. 10 shows a base of the same device, in a perspective view, from the first viewpoint,

[0038] FIG. 11 shows a bowl of the same device, in a perspective view, from the first viewpoint,

[0039] FIG. 12 shows the base of FIG. 10, in a cut-away perspective view, from the first viewpoint,

[0040] FIG. 13 shows the bowl of FIG. 11, in a cut-away perspective view, from the first viewpoint,

[0041] FIG. 14 shows a hearth of the same device, in a perspective view, from a second low-angle viewpoint,

[0042] FIG. 15 shows the hearth of FIG. 14, in a cut-away perspective view, according to a first section plane, from the second viewpoint,

[0043] FIG. 16 shows the hearth of FIG. 14, in a cut-away perspective view, along a second section plane at 45° with respect to the first section plane, from the second viewpoint.

[0044] The principle of the invention is illustrated in FIG. 3. The heater element H is disposed above the mixture M from which it is separated in a substantially tight manner by a shield S comprising no piercing. The smoke generator 1 according to the invention enables the necessary first fluid circulation C1, but is shaped so as to force said first fluid circulation C1 between the heater element H and the mixture M and to feature a baffle, so that the path of the fluid is necessarily indirect, non-rectilinear and more preferably according to a path including at least one ascending section A.

[0045] The smoke generator device 1 for a hookah 10 according to the invention, as illustrated in FIGS. 4-7, comprises a bowl 2 and a hearth 3. The bowl 2 is shaped so as to take place at the top of a chimney 11 of a hookah 10

and includes a receptacle 20 adapted to receive the mixture M. The hearth 3 is shaped so as to be disposed at the top of the bowl 2 above the mixture M. The hearth 3 is adapted to receive a heater element H.

[0046] The hearth 3 comprises a base 4 and a cover 5. The base 4 is adapted to support the heater element H. The base 4 forms a shield S avoiding a very quick combustion of the mixture M in direct contact with the heater element H. The base 4 is a good heat conductor in order to communicate its heat to the mixture M. The cover 5 is assembled with the base 4 to enclose the hearth 3, around the heater element H.

[0047] According to a major feature, the device 1 is shaped so as to prevent a direct circulation between the hearth 3 which contains the heater element H and the receptacle 20 of the bowl 2 which contains the mixture M. On the contrary, the device 1 is shaped so as to enable a first fluid circulation C1 from the hearth 3 to the receptacle 20 by forcing this first circulation C1 to include at least one baffle. Thus, there is no line-of-sight rectilinear direct path, between the hearth 3 and the receptacle 20. The first fluid circulation C1 between the hearth 3 and the receptacle 20 is indirect, non-rectilinear.

[0048] Still advantageously, the first circulation C1 is shaped so as to impose at least one ascending section A on the fluid. This advantageous feature allows, using gravity, preventing the ashes or debris of coal, naturally heavier than air, from following the first circulation C1 and reaching the mixture M. According to one embodiment, the fluid enters into the first circulation C1 by the top of the hearth 3, causing the fluid to rise according to the ascending section A.

[0049] In order to shape the first circulation C1, the cover 5 comprises at least one first channel 51 formed across the thickness of the cover 5 adapted to enable the first circulation C1.

[0050] According to a possible embodiment, the first channel 51 begins at the level of a hole 55. Herein, the cover 5 includes an outer wall 52 and an inner wall 53 spaced apart in order to form at least one passage between the two walls across the thickness of the cover 5. The hole 55 is practiced, advantageously in the ceiling of the cover 5, only in the inner wall 52. The first channel 51 continues between the two walls 52, 53 until going down to the base 4. At least one passage 45 passing through the opposite base 4 enables the channel 51 to open into the receptacle 20, containing the mixture M. The junction between the cover 5 and the base 4 is substantially tight, at least at the level of said at least one passage 45. The volume inside the hearth 3 is not in communication with said at least one passage 45, in order not to replicate the drawback of the art prior.

[0051] According to an alternative embodiment, without a passage 45 passing through the base 4, the channel 51 comprises a tight bypass of the base 4 by the outside, beyond its periphery.

[0052] It may be noticed, by comparing the block diagram of the prior art, FIG. 2, and of the invention, FIG. 3, that the length of the first circulation C1, or what is equivalent, the length of the first channel 51 is greatly extended by the invention, compared to a substantially zero length according to the prior art. Thus, by its positioning in the cover 5, the channel 51 may advantageously be shaped so as to have a length of at least 1 cm, preferably at least 3 cm, and even more.

[0053] The cover 5 may be made of any material, provided that it withstands the thermal stresses caused by the heat, such as a plastic material, a glass, a ceramic or else a metal material. However, according to another advantageous feature, the cover 5 is made of a good heat-conducting material. This material may be a light alloy, and for example aluminum. Thus, the significant channel 51 length forms a heat exchanger, which together with the ambient air present around the outer wall 52 of the cover 5, makes a dissipator adapted to cool the fluid circulating therein. The path length is herein an advantage in that, on the one hand, it enhances the cooling effect and, on the other hand, in that it provides a regulating effect. It follows that the fluid flowing through the first circulation C1, by passing through said at least one channel 51, comes out with a regulated temperature, substantially constant over time, despite the possible variations in the temperature of the heater element H. This is particularly advantageous for a good controlled combustion of the mixture M and contributes in improving the smoker's experience. In addition, this thermal regulation effect advantageously eliminates the need for any means for setting the intensity of the heater element H, for example a means for setting the combustion by means of an adjustable air inlet.

[0054] According to another major feature, the device 1 is further shaped so as to enable a second circulation C2 enabling an air inlet into the hearth 3, which is substantially central from the bottom. It herein consists of the combustion air which joins the heater element H in the hearth 3 in order to enable the combustion thereof.

[0055] According to the prior art, the combustion air has been directly introduced into the hearth because of an absence of a cover or via at least one vent made in the cover, in the ceiling and/or in the sidewalls of the cover. This may cause difficulties in producing the combustion of the heater element. One response proposed by some devices of the prior art is a device allowing setting the incoming air flow rate, in order to increase it at the beginning of combustion, then to reduce it afterwards once the combustion is well established. This degrades the smoker's experience in that he is required, several times during a session, to modify said setting.

[0056] According to the invention, the possibility of a low air inlet advantageously allows performing a second circulation C2 involving a natural drawing, which is self-maintaining and which is also self-regulated depending on the demand: being increased, at the startup, when the device 1 is cold, and then decreasing as the device 1 heats up.

[0057] This is made possible by a suitable shaping of the device 1. The bowl 2 is arranged around and comprises an axial through central chimney 21 adapted to enable the produced smoke to reach the chimney 11 of the hookah 10. Also, the bowl 2 comprises a lower portion 22 shaped so as to enable an assembly of the bowl 2 and of the device 1 at the top of the chimney 11 of the hookah 10. This assembly may be carried out by any means, for example by a nesting. This assembly is advantageously smoke-tight. The bowl 2 further comprises an upper portion 23 comprising the receptacle 20. The upper portion 23 is shaped so as to support the hearth 3. The assembly between the bowl 2 and the hearth 3 may be carried out by any means, for example by a nesting. This assembly is advantageously smoke-tight. The bowl 2 further comprises at least one second channel 24. Such a second channel 24 passes axially substantially through the entire bowl 2 and connects an inlet 241 to an outlet 242 by

means of a conduit 243 substantially parallel to the central chimney 21. An inlet 241 is formed at the lower portion 22, preferably radially and peripherally, in order to disturb neither the path of the smoke in the chimney 21, 11, nor the assembly of the bowl 2 on the chimney 11. The shape and the radial positioning of the inlet 241 ensure that this inlet 241 is not plugged, including by a wider hookah at the level of the interface of the chimney 11 with the bowl 2. An outlet 242 is formed at the upper portion 23, preferably substantially axially and centrally, to the extent that the chimney 21 allows so, so as to bring in air into the hearth 3, directly beneath the heater element H. An outlet 242 is disposed directly beneath the base 4. In order to enable the passage of the air, the base 4 comprises at least one substantially vertical via 41. A via 41 passes through the base 4 opposite an outlet 242 and vertically connects, in a substantially tight manner, an outlet 242 with the inside of the hearth 3, thus extending a second channel 24. The base 4 advantageously comprises as many vias 41 as the hearth 2 comprises second channels 24, four in the illustrated embodiment. These channels 24 and vias 41 are adapted to be disposed opposite to each other so as to form a second extended channel 24, 41. This advantageously allows supplying with air, by natural drawing, a combustion of the heater element H in the hearth 3.

[0058] According to an advantageous embodiment, the base 4 comprises, on the hearth side, around the outlets of the vias 41, a groove 46, facilitating the exit of the air, even when a piece of coal is disposed facing a via 41.

[0059] It should be noted that such a second circulation C2, ensuring a drawing by an air inlet from the bottom, is advantageously made possible by the fact that the first circulation C1 no longer passes throughout the base 4. Otherwise, there would be a risk of short circuit, the drawn air directly joining the chimney 21.

[0060] According to an advantageous embodiment, shown more particularly in FIGS. 5, 7, 9, 15, 16, the cover 5 further comprises at least two walls 52, 53. As previously described, by forming a space across the thickness of the cover 5, these two walls 52, 53 enable the passage of at least a first channel 51. They also form, as previously described, a heat exchanger allowing regulating the temperature of the air circulating therein. The fact of extending the presence of the vacuum between the two walls 52, 53, beyond the only need for passage of at least one channel 51, to the entire surface of the cover 5, has another advantage: the external wall 52 is significantly less hot, thus being separated by a space of the wall 53, very hot because of its proximity to the heater element H. This allows ensuring that the external wall 52 remains cooler and limits the risk of burns for a user.

[0061] The addition of a third, or even a fourth wall, allows, on the one hand, enlarging the length of the baffle and of the first channel 51 and, on the other hand, cooling further the outermost wall.

[0062] In order to reinforce further the anti-burn effect, and advantageously enable a manipulation of the hearth 3, including when it is hot, the cover 5 further comprises a handle 54 made of a heat-insulating material. This heat-insulating material may be any material, such as a plastic material, a leather or a wood, and may be for example silicone. The handle 54 is preferably annularly shaped into a ring peripherally surrounding the cover 5. While the prior art provided a removable handle, such as a re-use of a coal

tong, the invention integrates a permanent handle **54**, which further reduces the risk of burns.

[0063] According to another feature, illustrated more particularly in FIGS. **8**, **9**, **10**, **12**, **14-16**, the cover **5** and the base **4** advantageously comprise complementary interlocking means **44**, **56**. Thus, according to the illustrated embodiment, at least one hook **56**, disposed at the bottom of the cover **5**, is adapted to be vertically engaged into at least one slot **44** formed in the base **4**. A simple rotation enables said at least one hook **56** to be locked in said at least one slot **44**. This allows enclosing the hearth **3** by securing the cover **5** on the base **4**. A rotation in the reverse direction further allows disengaging them. Advantageously, there is the same number of slots **44** and hooks **56** which face each other. The complete hearth **3**, comprising the secured cover **5** and base **4**, can thus be manipulated by grasping it by the cover **5**, advantageously by its handle **54**. These features greatly simplify the operations of handling and cleaning the device **1**, including when it is still hot.

[0064] The locking means **44**, **56** have a degree of angular symmetry that is a sub-multiple of or equal to that of the circulations C1-C3. Thus, in the illustrated preferred embodiment, all circulations C1-C3 have a 4 degree of symmetry, i.e. four elements angularly evenly distributed at 90°. The same applies to the locking means **44**, **56** which have an equal degree of symmetry, i.e. 4, but which could also be a sub-multiple thereof, i.e. 2 or 1.

[0065] Another degree of symmetry, even or odd: 2, 3, 5, . . . , is possible and equivalent, as long as it remains identical or sub-multiple between the locking means, on the one hand, and the circulations, on the other hand, in order to allow them to be interposed. Thus, for example with a 3 degree of symmetry, there would be 3 pairs of locking means, preferably angularly evenly distributed, i.e. every 120°, interposed with circulations C1-C3, themselves also 3 in number, preferably angularly evenly distributed, i.e. every 120°.

[0066] According to the illustrated embodiment, a slot **44** is adjacent to a passage **45**, so as to limit the number of machining operations by allowing for a common making. The slot **44** is the small cutout closer to the center, whereas the passage **45** is the larger cutout to the outside.

[0067] According to another feature, the bottom of the base **4** and the upper portion **23** of the bowl **2** are shaped so as to be assembled in a substantially tight manner. If as represented, the two portions are circular, the upper portion **23** of the bowl **2** may for example have a bore in which the cylindrical base **4** is housed. The assembly must advantageously be able to be carried out or disassembled manually. A slightly tight adjustment ensures sealing to the smoke. It has been seen that the base **4** is advantageously made of a metal material. The bowl **2** may be made of any material, for example glass, metal, ceramic or plastic. According to a preferred embodiment, the bowl **2** is made of a food grade silicone. If the bowl **2** is made of an elastic material, such as an elastomer, its elasticity is advantageously used to ensure the sealing.

[0068] The bowl **2** and the base **4** cooperate for different functions, such as the second circulation C2 ensuring the drawing, already described, and others described above, which advantageously benefit from an alignment. Thus, for the second circulation C2, a second channel **24** disposed in the bowl **2** is advantageously aligned with a via **41** disposed in the base **4**. To ensure this alignment, the base **4** and the

bowl **2** respectively comprise complementary indexing means **42**, **27**. These indexing means **42**, **27** ensure a rotational indexed position and an anti-rotation function. This is shown more particularly in FIGS. **10-13**. The base **4** comprises at least one indexing means **42**, herein a lug **42**, adapted to engage a complementary indexing means **27**, herein a slot **27**, disposed opposite thereto in the bowl **2**.

[0069] As is the case with the locking means **44**, **56**, the indexing means **27**, **42** have a degree of symmetry which is a sub-multiple of or equal to that of the circulations C1-C3.

[0070] According to another feature, shown more particularly in FIGS. **11**, **13**, the bowl **2** further comprises a wall **28** separating the receptacle **20** from the chimney **21**. This wall **28** with a substantially annular shape, thus delimits a receptacle **20** with a substantially toric shape. This wall **28** advantageously allows the mixture M to be contained within the peripheral receptacle **20**.

[0071] In order to enable the smoke, produced from the mixture M in the receptacle **20**, to join the chimney **21** according to a substantially horizontal path, at least one opening **29** is cut in the wall **28**.

[0072] In the smoke generator **1** according to the invention, at least three fluid circulations C1-C3 coexist. The first fluid circulation C1 between the hearth **3** and the receptacle **20** via said at least one first channel **51** and the second low air inlet circulation C2 for drawing via said at least one second channel **24**, **41** have already been described. These circulations intersect tightly, without mixing the fluids they convey.

[0073] A substantially horizontal third smoke circulation C3 should be added between the receptacle **20** and the chimney **21**. This is shown more particularly in FIGS. **14-16**. To this end, the device **1** comprises at least one third channel **43**. Said substantially horizontal third channel **43**, in order to pass through the wall **28**, is disposed in said at least one opening **29**, if the latter is present. Such a third channel **43**, must be disposed at the interface between the base **4** and the bowl **2**, for example within a heat exchanger part, further comprising said at least one substantially vertical via **41**.

[0074] As illustrated more particularly in FIGS. **14-16**, in the illustrated embodiment, this exchanger is made in the base **4**. Alternatively, it could be made in an independent part or else alternatively in the bowl **2**.

[0075] Said at least one substantially horizontal third channel **43** intersects, in a tight manner, said at least one substantially vertical second channel **24**, **41**. For this purpose, said at least one third channel **43** is angularly offset relative to said at least one second channel **24**, **41**. This is shown more particularly in FIGS. **12**, **13**, **7**, **14-16**. According to the illustrated embodiment, a first number of vias **41** is made, allowing for the second channel C2, herein equal to 4.

[0076] Advantageously, these vias **41** are angularly evenly distributed, i.e. here every 90°. The same number of third channels **43** is made. Advantageously, these channels **43** are also angularly evenly distributed, i.e. herein every 90°, by offsetting them, in order to interpose them with the vias **41**, substantially at an angle of 45°.

[0077] In one embodiment comprising 3 vias **41**, advantageously evenly distributed every 120°, it is appropriate to have 3 third channels **43**, advantageously angularly evenly distributed every 120°, by offsetting them, in order to interpose them with the vias **41**, substantially at an angle of 60°.

[0078] It has been shown that the fluid originating from the hearth 3, via the first circulation C1 following at least one first channel 51, reaches the receptacle 20 via at least one passage 45 formed in the base 4. This fluid, comprising mostly hot air, enables the combustion of the mixture M and the smoke thus produced follows the third circulation C3 to join the chimney 21. Advantageously, and as shown more particularly in FIGS. 14-16, in order to enlarge the length 47 of the path of the fluid near the mixture M, the distance 47 between the first circulation C1 and the third circulation C3 is maximized. For this purpose, the distance 47 between the outlet of the first circulation C1, i.e. the outlet of a first channel 51 at the level of a passage 45, and the inlet of the third circulation C3, i.e. the inlet of a third channel 43, is maximized. In the illustrated preferred embodiment, there are 4 passages 45, angularly evenly distributed, i.e. every 90°. Similarly, there are 4 third channels 43, angularly evenly distributed, i.e. every 90°. Also the maximization is carried out by angularly offsetting, herein by 45°, the 4 passages 45 and the 4 third channels 43.

[0079] According to another feature, the cover 5 further comprises at least one side vent 57, preferably at the lower portion. Such a side vent 57 constitutes an additional air inlet. It is important to note that such a side vent 57 passes through the entire cover 5 in a tight manner with respect to the space between the two walls 52, 53 and with respect to said at least one first channel 51. This is shown more particularly by comparing the FIGS. 6 and 7 between which the device 1 has been rotated by 45° about the axis of the chimney 21 or else in FIG. 9. At the level of a side vent 57 a continuous web joins the two walls 52, 53 in a tight manner. This is shown more particularly in the side vent 57 of FIG. 9 or in that of FIG. 16.

[0080] Advantageously, in the illustrated embodiment, the side vents 57, 4 in number, are angularly evenly distributed, i.e. every 90°. Similarly, the first channels 51, and the opposite passages 45 which extend them in the base 4, are 4 in number and are advantageously angularly evenly distributed, i.e. every 90°, advantageously offset substantially by an angle of 45°, in order to be interposed between the side vents 57.

[0081] According to another feature, the cover 5 also comprises at least one upper vent 58, preferably at the top of the cover 5.

1. A smoke generator device for a hookah, comprising a bowl and a bowl being shaped so as to take place at the top of a chimney of a hookah and including a receptacle adapted to receive a smoking mixture, the hearth being shaped so as to be disposed at the top of the bowl above the mixture, being adapted to receive a heater element and comprising a base, adapted to support the heater element and to communicate its heat to the mixture, and a cover enclosing the hearth, the device being shaped so as to enable a first fluid circulation from the hearth to the receptacle, wherein the first circulation includes at least one baffle.

2. The device according to claim 1, wherein the first circulation is shaped so as to comprise at least one ascending section.

3. The device according to claim 1, wherein the cover comprises at least one first channel formed across its thickness adapted to enable the first circulation.

4. The device according to claim 3, wherein the cover is made of a good heat-conducting material, and wherein the first channel has a length of at least 1 cm.

5. The device according to claim 1, further shaped so as to enable a second circulation ensuring an air inlet into the hearth which is substantially central from the bottom.

6. The device according to claim 5, wherein the bowl substantially has a shape of revolution, and further comprises a through central chimney a lower portion shaped so as to enable an assembly at the top of the chimney of the hookah, an upper portion comprising the receptacle and shaped so as to receive the hearth, and at least one second channel connecting a radial and peripheral inlet formed in the lower portion to a substantially axial and central outlet formed in the upper portion by means of a conduit substantially parallel to the central chimney, and wherein the base comprises at least one via, facing each outlet.

7. The device according to claim 1, wherein the cover comprises at least two walls.

8. The device according to claim 1, wherein the cover further comprises a handle made of a heat-insulating material.

9. The device according to claim 1, wherein the cover and the base comprise complementary interlocking means.

10. The device according to claim 1, wherein the base and the bowl are shaped so as to be assembled in a tight manner.

11. The device according to claim 1, wherein the base and the bowl comprise complementary rotational indexing means.

12. The device according to claim 1, wherein the bowl further comprises a wall separating the receptacle from the chimney, comprising at least one opening enabling the passage of a smoke from the receptacle to the chimney.

13. The device according to claim 6, wherein the bowl or the base further comprises at least one substantially horizontal third channel adapted to connect the receptacle to the chimney, disposed, where appropriate, in said at least one opening and sealed with respect to said at least one second channel.

14. The device according to claim 1, wherein said at least one third channel is angularly offset relative to said at least one second channel.

15. The device according to claim 13, wherein said at least one first channel is angularly offset relative to said at least one third channel, in order to maximize the path length of the fluid in the receptacle.

16. The device according to claim 1, wherein the cover further comprises at least one lateral vent, angularly offset relative to said at least one first channel, and at least one upper vent.

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