

(19)



(11)

EP 3 014 029 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:

04.04.2018 Bulletin 2018/14

(21) Application number: **14738649.4**

(22) Date of filing: **16.06.2014**

(51) Int Cl.:

E03F 5/04 ^(2006.01)

(86) International application number:

PCT/NL2014/000017

(87) International publication number:

WO 2014/209107 (31.12.2014 Gazette 2014/53)

(54) **SIPHON UNIT**

SIPHONANORDNUNG

ENSEMBLE SIPHON

(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**

(30) Priority: **25.06.2013 NL 1040270**

(43) Date of publication of application:

04.05.2016 Bulletin 2016/18

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WO-A1-2007/004863

WO-A1-2009/099323

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Description

FIELD OF THE INVENTION

[0001] The present invention relates in general to a siphon design.

BACKGROUND OF THE INVENTION

[0002] For collecting water in a sanitary space, such as for instance a bathroom, a shower room, et cetera, and discharging this water to a sewer, it is known to accommodate a stench lock in the discharge conduit for preventing odours from that sewer to reach the sanitary space. The operation of a stench lock is based on the fact that at least one segment of the conduit is completely filled with water. This conduit segment is rising in the discharge direction, i.e. the direction from sanitary space to sewer, usually even vertical.

[0003] Stench locks are found below baths and sinks. Usually, the space available there is no hindrance for the setup of a stench lock. However, stench locks are also needed in the discharge of water from the floor of a space, such as a shower space. For collecting and discharging water from the floor, gutter-shaped collecting devices have been developed, that are for instance placed along a wall and collect there the water flowing away from the floor. Obviously, the gutter-shaped collecting devices must be mounted below floor level. However, the space available there is small, and this applies particularly to the building height. In a particularly advantageous design, the discharge conduit is located immediately below the floor surface, substantially above the level of the bottom of the collecting gutter, and the discharge conduit connects to a side wall of the collecting gutter. Then there is no space for a stench lock in the discharge conduit, outside the gutter. Furthermore, a stench lock can get blocked, and it is desirable that the stench lock is accessible for cleaning purposes. For this reason, a solution has been found in the form of a stench lock design to be placed within the gutter, which will be indicated as siphon.

[0004] An example of such siphon is described in Dutch patent 1035003. This known siphon comprises a container with a closed bottom and closed side walls, and a cap with a closed upper side and closed side walls. The cap is larger than the container, and is arranged over the container, wherein the upper edge of the container is higher than the lower edge of the cap. In one of its side walls, the container has a passage, and so does the cap. In an operative condition, these passages are aligned, and they connect in a watertight manner to a passage in a vertical wall of the gutter, to which a discharge pipe is connected at the outer side. Water flowing away from the gutter flows below the lower edge of the cap, up and over the upper edge of the container, towards the said passages and towards the discharge pipe. For cleaning purposes, the cap and the container can be removed from the gutter.

SUMMARY OF THE INVENTION

[0005] In the case of the siphon as described in Dutch patent 1035003, the cap and the container are separate parts that are placed in the gutter or removed from the gutter by means of a vertical shifting movement. Consequently, sealings are necessary at two locations. The document shows that the container is provided with a connection flange that has a sealing ring accommodated in a groove that extends around the passage. This connecting flange is held by guide members at opposite sides of a connecting flange associated with the gutter. The watertight sealing is arranged by the contact between the sealing ring and the two connecting flanges; for that purpose, a relatively large pressing force is needed of the sealing ring against the connecting flange associated with the gutter. During placement or removal, the sealing ring shifts over the connecting flange associated with the gutter, which is fairly awkward just because of this high pressing force. On removal, it is then fairly awkward to exert the correct force on the container, since in the gutter there is little space for the user or the mechanic to get fingers behind the container. On placement, the sealing ring first shifts in front of the passage in the connecting flange associated with the gutter to subsequently arrive at the lower edge of this passage; in this case, there is danger that the sealing ring gets stuck behind the lower edge of this passage and is pulled out from its groove, so that a sealing effect is out of the question.

[0006] Siphon designs are also known where a tube part is attached to the siphon, and wherein that tube part is pushed into the discharge pipe, with an axial shifting movement parallel to the longitudinal direction of the discharge pipe and hence perpendicular to the side wall of the gutter. A large disadvantages of this design is, however, that the gutter must be fairly wide to allow this shifting movement of the siphon: the width of the gutter must at least be as large as the width of the siphon plus the length of the said tube part. WO-A-2007/004863 discloses a siphon unit according to the preamble of claim 1. An objective of the invention is to provide a siphon design wherein the above-mentioned problems have been eliminated or at least reduced. This objective is achieved by the siphon unit according to claim 1.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] These and other aspects, features and advantages of the present invention will be further clarified by the following description of one or more exemplary embodiments with reference to the drawings, in which same reference numerals indicate same or similar parts, in which indications "below/above", "higher/lower", "left/right" et cetera exclusively relate to the orientation shown in the figures, and in which:

figure 1A schematically shows a side view of an elongate gutter;

figure 1B schematically shows a cross section of an elongate gutter;
 figure 1C schematically shows a cross section of another embodiment of an elongate gutter;
 figure 2A shows a perspective view of a possible embodiment of a siphon assembly according to the present invention in taken-apart condition;
 figure 2B shows a cross section of the siphon assembly of figure 2A;
 figure 3 shows a cross section of a siphon unit;
 figure 4 shows a cross section of a transit tube part;
 figures 5A-5C illustrate the placement of a siphon unit.

DETAILED DESCRIPTION OF THE INVENTION

[0008] Figure 1A schematically shows a side view of a elongate gutter 10, and figure 1B schematically shows a cross section according to the line B-B in figure 1A. The gutter 10 has a bottom 11, longitudinal side walls 12 and 13, and end side walls 14 and 15. The upper side 16 of the gutter 10 is open, and forms an inflow opening surrounded by upper edges of the walls 11, 12, 13, 14. Before use, the gutter 10 is for instance mounted in a floor of a shower space, with the upper side 16 at the same level with or lower than the floor level. The bottom 11 may in principle be horizontal, but is preferably and as shown sloping to a lowest point, which in the example shown is located in the centre of the gutter. At this lowest point, a discharge opening 17 is formed in a side wall 12. Water that is to be discharged from the floor of the shower space flows over the edges of the side walls into the gutter 10, and eventually flows through the discharge opening 17 to a discharge pipe not shown for sake of simplicity.

[0009] For mounting a siphon, the gutter 10 is provided with a vertical mounting face 20 at the discharge opening 17. Depending of the material of the gutter 10, the mounting face 20 can be a flat part of the side wall 12, or a separate part attached to the side wall 12. Figure 1B shows an embodiment that can for instance be used if the gutter 10 is made from metal plate. In that case, the mounting face 20 can be attached to a metal tube part 21 of a few centimetres length, that can be welded in the discharge opening 17. The mounting face 20 can be welded to the metal tube part 21, or can be formed as an integral whole with that metal tube part 21. The tube part 21 projects from the side wall 12 of the gutter, and can be coupled in any suitable manner to a discharge pipe not shown for sake of simplicity.

[0010] Figure 1C schematically shows a cross section comparable to figure 1B, which can be used in the case of gutters of various materials, and in the case of various thicknesses of the side wall 12. The mounting face 20 is again attached to a tube part 21 of a few centimetres length. The mounting face 20 is preferably shaped as an integral whole with the tube part 21, for instance of PVC. In a particularly advantageous embodiment, the tube part

21 is provided with a threading 22 on its outer surface. Further, a screw sleeve 23 is provided having an inner thread 24 matching with the threading 22 of the tube part 21. The tube part 21 may integrally be provided with a sealing flange 25 located at some distance of the mounting face 20. At the inner side of the side wall 12, a first sealing ring 26 is accommodated between the side wall 12 and the sealing flange 25 or, in the case of absence of a separate sealing flange 25, between the side wall 12 and the mounting face 20. In the front edge of the screwing sleeve 23 directed to the gutter 10, a second sealing ring 27 may be accommodated. When the screwing sleeve 23 is screwed onto the tube part 21, the second sealing ring 27 presses against the outer side of the side wall 12 in a watertight manner, and the first sealing ring 26 presses against the inner side of the side wall 12 and against the sealing flange 25 in a watertight manner, such that the screwing sleeve 23 with the mounting face 20 is attached to the gutter 10 firmly and in a watertight manner. After that, for instance by gluing, the screwing sleeve 23 may be coupled to a discharge pipe not shown for the sake of simplicity.

[0011] The above shows some examples of a mounting face 20 that is associated with and extends around a discharge opening 17 of the gutter 10. The present invention is basically applicable in combination with a mounting face 20 of any type. In the following, the invention will be further explained for an exemplary embodiment according to the design of figure 1C.

[0012] Figure 2A shows a perspective view of a possible embodiment of a siphon assembly 1000 according to the present invention in taken-apart condition, and figure 2B shows a cross section of that siphon assembly 1000. The siphon assembly 1000 comprises a siphon container 100, a siphon cap 200, a transit tube part 300, and a screwing sleeve 500 with sealing ring 400. In a manner comparable to what has been described with reference to figure 1C, the transit tube part 300 should be placed through an opening in a side wall of a discharge gutter; this discharge gutter is not shown in figures 2A-2B for sake of simplicity.

[0013] The siphon container 200 has a closed bottom 101 and side walls 102, 103 standing up from the bottom. The siphon cap 200 has a closed upper side 201 and side walls 202, 203 extending downwards from this top side. In a top view, the siphon container 100 and the siphon cap 200 have an elongate contour. The long side walls will be indicated as "front wall" 102, 202 and "rear wall" 103, 203.

[0014] In its front wall 102, the siphon container 100 has a passage 110. Likewise, the siphon cap 200 has in its front wall 202 a passage 210, which is slightly larger than the passage 110 of the siphon container 100. Around its passage 110 the siphon container 100 is provided with a collar 120 projecting beyond its front wall 102, of which the outer diameter is larger than the diameter of the passage 210 of the siphon cap 200. On its outer surface, this collar 120 is provided with a circum-

ferential groove 121, into which fits the edge 212 of the passage 210 of the siphon cap 200.

[0015] The length and width of the siphon cap 200 are larger than the length and width of the siphon container 100, so that the siphon container 100 fits within the siphon cap 200. The siphon cap 200 is made of a rigid material, for instance metal or plastic such as PVC. The collar 120 of the siphon container 100 is made of a soft and deformable material such as a rubber or silicone. In principal, the walls of the siphon container 100 may be made of a rigid plastic, but preferably the siphon container 100 including the collar 120 is made as an integral whole from rubber or silicone.

[0016] Because the collar 120 of the siphon container 100 is deformable, the collar 120 can be placed through the opening 210 of the siphon cap 200 from the inner side of the siphon cap 200, in which case the circumferential edge 212 of the passage 210 of the siphon cap 200 is pushed into the circumferential groove 121 of the collar 120. Figure 3 shows this mounted condition, wherein the upper edge 104 of the siphon container 100 is located at a higher level than the lower edge 204 of the siphon cap 200. As long as there is water in the gutter 10 up to a level higher than the lower edge 204 of the siphon cap 200, the water lock is in operation.

[0017] The combination of siphon cap 200 with the siphon container 100 mounted therein as shown in figure 3 is placed into the gutter 10 or removed from the gutter as a unit; this unit will be indicated as siphon unit 600.

[0018] The transit tube part 300 has an entrance end 301 and an exit end 302. On its outer surface, the transit tube part 300 has a sealing flange 303. Between the sealing flange 303 and the exit end 302, the transit tube part 300 in the embodiment shown has a threading 304, for coupling with a screwing sleeve 500. At its entrance end 301, the transit tube part 300 is provided with a coupling flange 310 for coupling with the siphon unit 600.

[0019] Figure 4 shows the transit tube part 300 at a larger scale. The coupling flange 310 has a front face 320 that is at least as large as the collar 120. At its lower side, the coupling flange 310 is provided with a receiving space 314 for accommodating a coupling part 213 of the front wall 202 of the siphon cap 200. In the example shown, this receiving space 314 is formed as a horizontal gutter, defined by a coupling foot 311 formed to the coupling flange 310 having a bottom 313 and standing edge 312. The width of this receiving space 314, i.e. the dimension in the direction perpendicular to the front face 320, is slightly larger than the thickness of the coupling part 213 of the front wall 202 of the siphon cap 200. Instead of a horizontal gutter, it is for instance also possible to use coupling hooks.

[0020] At its upper side, the coupling flange 310 is provided with a latching member 330 that is capable of cooperating with the siphon cap 200. In the example shown, this latching member 330 has a hinging bar 331, that is hooked behind and can rotate within a clamping seat 315 of the coupling flange 310. The latching member 330

further comprises a latching lip 332 that is connected to the hinging bar 331 through to latching arms 333. Thus, in the example shown, the latching member 330 has the shape of a rectangular frame.

[0021] For cooperating with the latching lip 332, the siphon cap 200 has a latching edge 332 in its upper surface. Preferably, and as shown, the siphon cap 200 in its upper surface has a U-shaped recess for accommodating the latching lip 332 and the two latching arms 333.

[0022] Figures 5A-5C illustrate the placing of the siphon unit 600 in a practical situation. In that case, the transit tube part 300 is attached in a side wall of a gutter, but this gutter is not shown for sake of clarity. The screwing sleeve 500 is screwed onto the threading 304 of the transit tube part 300, and thus the transit tube part 300 is clamped to the side wall of a gutter.

[0023] In figure 5A, the siphon unit 600 is placed into the (not shown) gutter from above, with a vertical downwards movement, with the siphon unit 600 being tilted slightly backwards. The downward movement ends when the coupling part 213 of the front wall 202 of the siphon cap 200 reaches the receiving space 314 of the coupling flange 310 (figure 5B). Because of the backwards tilted attitude of the siphon unit 600, the collar 120 is, during the downward movement, completely free from the front face 320 of the coupling flange 310, or only touches this slightly.

[0024] While the coupling part 213 of the front wall 202 of the siphon cap 200 is held in the receiving space 314 of the coupling flange 310, the siphon unit 600 is pushed forward, i.e. in the direction of the coupling flange 310. This causes the collar 120 to come to lie fully against the front face 320 of the coupling flange 310. It is important here that the collar 120 is only subjected to a pressing force, and not to a shearing force.

[0025] Finally, in this joint condition, the siphon unit 600 is locked by pressing the latching member 330 down, causing the latching lip 332 to engage behind the latching edge 232 of the siphon cap 200.

[0026] In this joint condition, the front edge 122 of the collar 120 is firmly clamped between the front wall 202 of the siphon cap 200 and the front face 320 of the coupling flange 310. Thus, the collar 120 takes care of both a watertight sealing between the collar 120 and the siphon cap 200 on the one hand and a watertight sealing between the collar 120 and the transit tube part 300 on the other hand.

[0027] For removing the siphon unit 600, for instance for cleaning it, it is sufficient to disengage the latching member 330, after which the siphon unit 600 can be tilted backwards with a small force, and can be lifted. It is not necessary for the user to grip with his fingers behind and below the siphon unit 600. Consequently, it is possible to have a smaller gutter, namely only slightly wider than the siphon unit 600, which is desirable from an aesthetic view.

[0028] In the example shown, the siphon cap 200 on its front wall 202 is further provided with two vertical edg-

es 220, projecting forward, at opposite sides of the passage 210, which in the condition joint with the coupling flange 310 are located beside this coupling flange 310 and form stops for the coupling flange 310 in horizontal direction. Hereby an improved positional accuracy and stability in horizontal direction is achieved.

[0029] It will be clear to a person skilled in the art that the invention is not limited to the exemplary embodiments discussed in the above, but that several variations and modifications are possible within the protective scope of the invention as defined in the attached claims. For instance, two or multiple functions may be performed by a single entity.

[0030] For instance, it is possible that the latching member has a different form. For instance, it is possible that the latching member is hingedly attached on the siphon cap and can be brought into engagement with the coupling flange.

[0031] Even if certain features are mentioned in different dependent claims, the present invention also relates to an embodiment which has these features in common. Features which have not been explicitly described as being essential may also be omitted. Possible reference numerals used in a claim should not be explained as limiting for the scope of that claim.

Claims

1. Siphon unit (600) comprising:

- a siphon container comprising: a closed bottom (101) and side walls (102, 103) standing up from the bottom; a first passage (110) in one of those side walls (102), a collar (120) around said first passage (110) projecting out of said one side wall (102), wherein the collar (120) of the siphon container (100) is made of a soft and deformable material such as rubber or silicone, wherein the siphon container (100) including the collar (120) is optionally made as an integral whole of a soft and deformable material such as rubber or silicone, the siphon unit (600) further comprising
- a siphon cap (200) comprising:

- a closed upper side (201) and side walls (202, 203) extending downwards from that upper side;
- a second passage (210) in one of those side walls (202);

wherein the siphon container (100) is arranged within the siphon cap (200); **characterised in that** the collar (120) of the siphon container (100) extends outwards through the passage opening (210) of the siphon cap (200); wherein the passage (210) of the siphon cap (200) is provided with a circumferential edge (212) and the collar (120) is provided with a

circumferential groove (121), the circumferential edge (212) of the passage (210) of the siphon cap (200) is located in the circumferential groove (121) of the collar (120).

2. Siphon assembly (1000) comprising:

- a siphon unit (600) according to claim 1, a transit tube part (300) for attachment in or to an outlet opening (17) of a discharge gutter (10), which transit tube part (300) at a first end (301) is provided with a coupling flange (310) with a front face (320);
- wherein the coupling flange (310) at its lower side is provided with a receiving space (314) for hingedly coupling to a coupling part (213) of the siphon cap (200);
- and wherein the siphon assembly further comprises a latching member (330) to latch the upper side of the siphon cap (200) to the upper side of the coupling flange (310).

3. Siphon assembly according to claim 2, wherein the latching member (330) is adapted to pinch together the upper side of the siphon cap (200) and the upper side of the coupling flange (310).

4. Siphon assembly according to claim 2 or 3, wherein the latching member (330) is hingedly coupled to the upper side of the coupling flange (310) and has a free end that is capable of engaging the upper side of the siphon cap (200).

5. Siphon assembly according to claim 2 or 3, wherein the latching member (330) is hingedly coupled to the upper side of the siphon cap (200) and has a free end that is capable to engage the upper side of the coupling flange (310).

6. Siphon assembly according to any of claims 2-5, wherein a front edge (122) of the collar (120) takes care of the sealing between the siphon container (100) and the siphon cap (200) and also takes care of the sealing between the siphon container (100) and the coupling flange (310).

7. Siphon assembly according to any of claims 2-6, wherein the transit tube part (300) at its end directed away from the coupling flange (310) is provided with threading.

8. Siphon assembly according to claim 7, further comprising a screw sleeve (500) matching with the threading of the transit tube part (300).

9. Siphon assembly according to claim 8, wherein the screw sleeve (500) at its free end directed towards the coupling flange (310) is provided with a sealing

ring (400).

10. Siphon assembly according to any of claims 2-9, wherein the transit tube part (300) is welded to the discharge gutter (10) or forms therewith an integral whole.

Patentansprüche

1. Siphon-Einheit (600) umfassend:

- einem Siphon-Behälter umfassend: einen geschlossenen Boden (101) und Seitenwände (102, 103), die vom Boden abstehen; einen ersten Durchgang (110) in einer dieser Seitenwände (102), einen Kragen (120) um den ersten Durchgang (110), der aus der ersten Seitenwand (102) herausragt, wobei der Kragen (120) des Siphon-Behälters (100) aus einem weichen und umformbaren Material wie Gummi oder Silikon hergestellt ist, wobei der Siphon-Behälter (100), der den Kragen (120) beinhaltet, optional als ein einheitliches Ganzes aus einem weichen, umformbaren Material wie Gummi oder Silikon hergestellt ist, die Siphon-Einheit (600) weiter umfassend
- einen Siphon-Deckel (200) umfassend:

-- eine geschlossene obere Seite (201) und Seitenwände (202, 203), die sich von dieser oberen Seite nach unten erstrecken;
-- einen zweiten Durchgang (210) in einer dieser Seitenwände (202);

wobei der Siphon-Behälter (100) innerhalb des Siphon-Deckels (200) angeordnet ist;

dadurch gekennzeichnet, dass der Kragen (120) des Siphon-Behälters (100) sich nach außen durch die Durchgangsöffnung (210) des Siphon-Deckels (200) erstreckt;

wobei der Durchgang (210) des Siphon-Deckels (200) mit einem umlaufenden Rand (212) ausgestattet ist und der Kragen (120) mit einer umlaufenden Rille (121) ausgestattet ist, wobei sich der umlaufende Rand (212) des Durchgangs (210) des Siphon-Deckels (200) in der umlaufenden Rille (121) des Kragens (120) befindet.

2. Siphon-Anordnung (1000) umfassend:

eine Siphon-Einheit (600) nach Anspruch 1, ein Durchführungsrohr-Teil (300) zur Anbringung in oder an eine Auslassöffnung (17) einer Auslauf-Rinne (10), dessen Durchführungsrohr-Teil (300) an einem ersten Ende (301) mit einem Anbindungsflansch (310) mit einer vorderen Seite (320) ausgestattet ist;

wobei der Anbindungsflansch (310) an seiner unteren Seite ausgestattet ist mit einem Aufnahmeraum (314) zum klappbaren Anbinden an ein Anbindungsteil (213) des Siphon-Deckels (200);

und wobei die Siphon-Anordnung zusätzlich ein Verriegelungselement (330) umfasst, um die obere Seite des Siphon-Deckels (200) mit der oberen Seite der Anbindungsflansches (310) zu verriegeln.

3. Siphon-Anordnung nach Anspruch 2, wobei das Verriegelungselement (330) eingerichtet ist, um die obere Seite des Siphon-Deckels (200) und die obere Seite des Anbindungsflansches (310) zusammenzudrücken.

4. Siphon-Anordnung nach Anspruch 2 oder 3, wobei das Verriegelungselement (330) klappbar mit der oberen Seite des Anbindungsflansches (310) verbunden ist und ein freies Ende besitzt, das dazu in der Lage ist, die obere Seite des Siphon-Deckels (200) einzurasten.

5. Siphon-Anordnung nach Anspruch 2 oder 3, wobei das Verriegelungselement (330) klappbar mit der oberen Seite des Siphon-Deckels (200) verbunden ist und ein freies Ende besitzt, das dazu in der Lage ist, die obere Seite des Anbindungsflansches (310) einzurasten.

6. Siphon-Anordnung nach einem der Ansprüche 2 bis 5, wobei eine vordere Kante (122) des Kragens (120) für die Abdichtung zwischen dem Siphon-Behälter (100) und dem Siphon-Deckel (200) sorgt und auch für die Abdichtung zwischen dem Siphon-Behälter (100) und dem Anbindungsflansch (310) sorgt.

7. Siphon-Anordnung nach einem der Ansprüche 2 bis 6, wobei das Durchführungsrohr-Teil (300) an seinem von dem Anbindungsflansch (310) wegführenden Ende mit Gewinde ausgestattet ist.

8. Siphon-Anordnung nach Anspruch 7 zusätzlich umfassend einer Schraubhülse (500), die zu dem Gewinde des Durchführungsrohr-Teils (300) passt.

9. Siphon-Anordnung nach Anspruch 8, wobei die Schraubhülse (500) an ihrem freien, zum Anbindungsflansch (310) hinführenden Ende mit einem Dichtungsring (400) ausgestattet ist.

10. Siphon-Anordnung nach einem der Ansprüche 2 bis 9, wobei das Durchführungsrohr-Teil (300) an der Auslauf-Rinne (10) angeschweißt ist oder damit ein einheitliches Ganzes bildet.

Revendications

1. Unité de siphon (600), comprenant:

un contenant de siphon comprenant un fond fermé (101) et des parois latérales (102, 103) qui se dressent à partir du fond; un premier passage (110) dans l'une de ces parois latérales (102); un collier (120) autour dudit premier passage (110) faisant saillie hors de ladite une paroi latérale (102),
dans laquelle le collier (120) du contenant de siphon (100) est constitué d'un matériau malléable et déformable tel que du caoutchouc ou du silicone,
dans laquelle le contenant de siphon (100) comprenant le collier (120) est optionnellement constitué comme un ensemble intégré d'un matériau malléable et déformable tel que du caoutchouc ou du silicone,
l'unité de siphon (600) comprenant en outre:

une coiffe de siphon (200), comprenant:

un côté supérieur fermé (201) et des parois latérales (202, 203) qui s'étendent vers le bas à partir de ce côté supérieur;
un second passage (210) dans une de ces parois latérales (202),

dans laquelle le contenant de siphon (100) est agencé à l'intérieur de la coiffe de siphon (200),

caractérisée en ce que le collier (120) du contenant de siphon (100) s'étend vers l'extérieur à travers l'ouverture de passage (210) de la coiffe de siphon (200),
dans lequel le passage (210) de la coiffe de siphon (200) comprend un bord circonférentiel (212) et le collier (120) comporte une rainure circonférentielle (121), le bord circonférentiel (212) du passage (210) de la coiffe de siphon (200) étant situé dans la rainure circonférentielle (121) du collier (120).

2. Ensemble de siphon (1000), comprenant:

une unité de siphon (600) selon la revendication 1;
une partie de tube de transit (300) pour la fixation dans ou sur une ouverture de sortie (17) d'une gouttière de décharge (10), ladite partie de tube de transit (300) étant pourvue à une première extrémité (301) d'une bride de couplage (310) présentant une face avant (320),
dans lequel la bride de couplage (310) est pour-

vue à son côté inférieur d'un espace de réception (314) pour être couplé de façon articulée à une partie de couplage (213) de la coiffe de siphon (200); et

dans lequel l'ensemble de siphon comprend en outre un élément de verrouillage (330) servant à verrouiller le côté supérieur de la coiffe de siphon (200) au côté supérieur de la bride de couplage (310).

3. Ensemble de siphon selon la revendication 2, dans lequel l'élément de verrouillage (330) est adapté pour pincer ensemble le côté supérieur de la coiffe de siphon (200) et le côté supérieur de la bride de couplage (310).

4. Ensemble de siphon selon la revendication 2 ou 3, dans lequel l'élément de verrouillage (330) est couplé de façon articulée au côté supérieur de la bride de couplage (310) et présente une extrémité libre qui est capable d'engager le côté supérieur de la coiffe de siphon (200).

5. Ensemble de siphon selon la revendication 2 ou 3, dans lequel l'élément de verrouillage (330) est couplé de façon articulée au côté supérieur de la coiffe de siphon (200) et présente une extrémité libre qui est capable d'engager le côté supérieur de la bride de couplage (310).

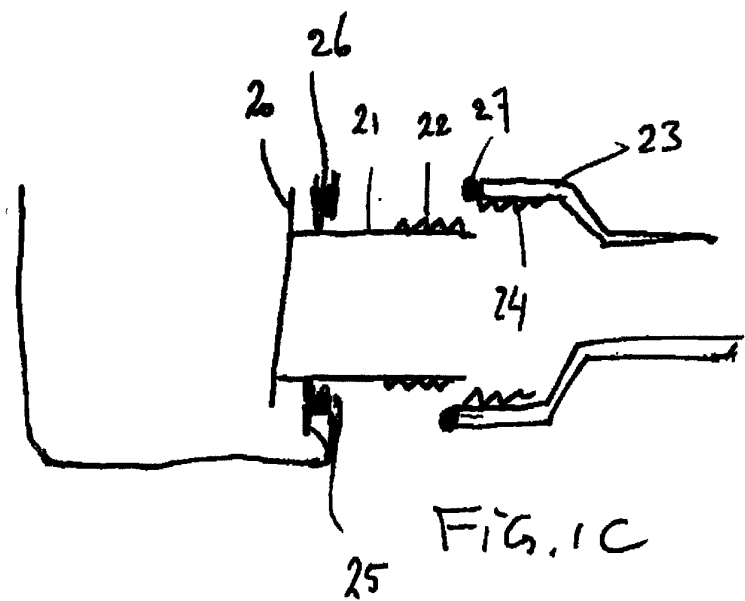
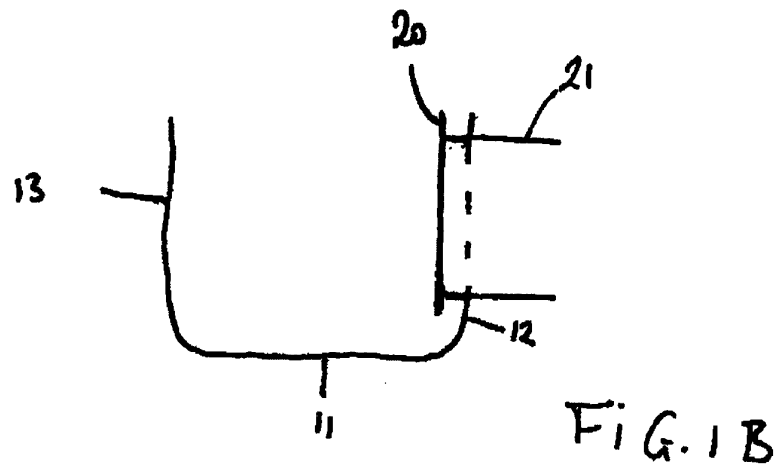
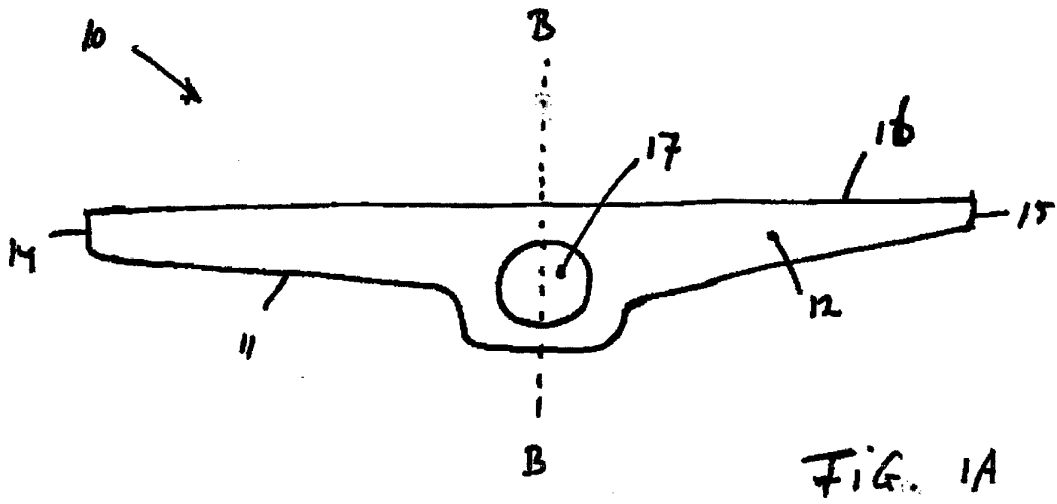
6. Ensemble de siphon selon l'une quelconque des revendications 2 à 5, dans lequel un bord avant (122) du collier (120) assure l'étanchéité entre le contenant de siphon (100) et la coiffe de siphon (200) et assure également l'étanchéité entre le contenant de siphon (100) et la bride de couplage (310).

7. Ensemble de siphon selon l'une quelconque des revendications 2 à 6, dans lequel la partie de tube de transit (300) comporte un filetage à son extrémité orientée à l'écart de la bride de couplage (310).

8. Ensemble de siphon selon la revendication 7, comprenant en outre un manchon à visser (500) qui correspond au filetage de la partie de tube de transit (300).

9. Ensemble de siphon selon la revendication 8, dans lequel le manchon à visser (500) est pourvu d'une bague d'étanchéité (400) à son extrémité libre orientée en direction de la bride de couplage (310).

10. Ensemble de siphon selon l'une quelconque des revendications 2 à 9, dans lequel la partie de tube de transit (300) est soudée à la gouttière de décharge (10) ou forme un ensemble intégré avec celle-ci.



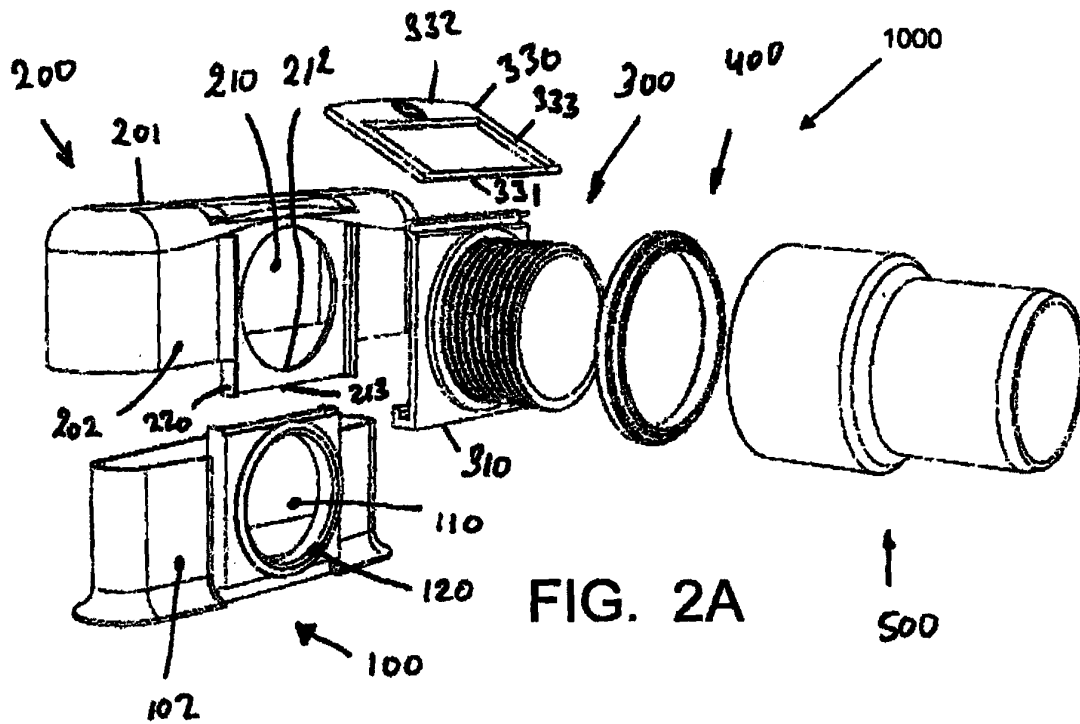


FIG. 2A

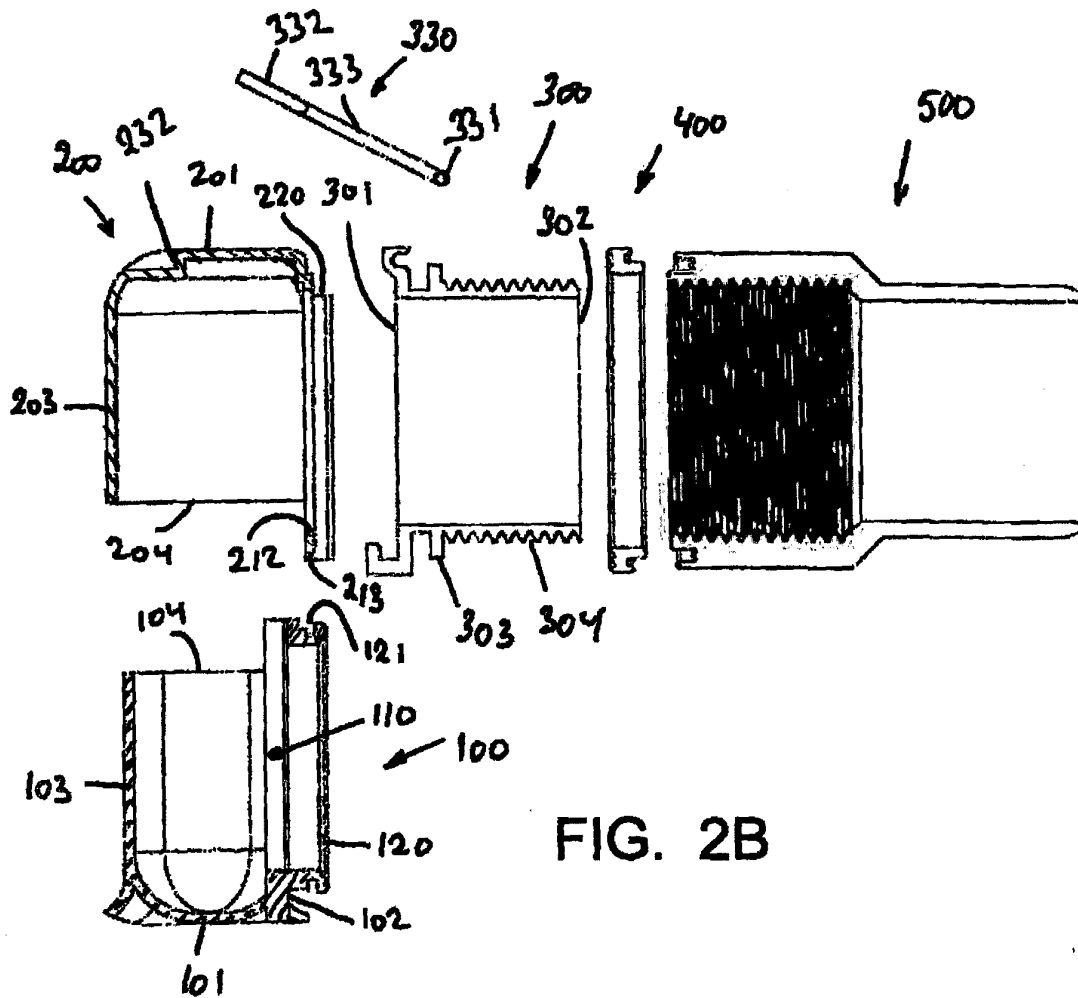


FIG. 2B

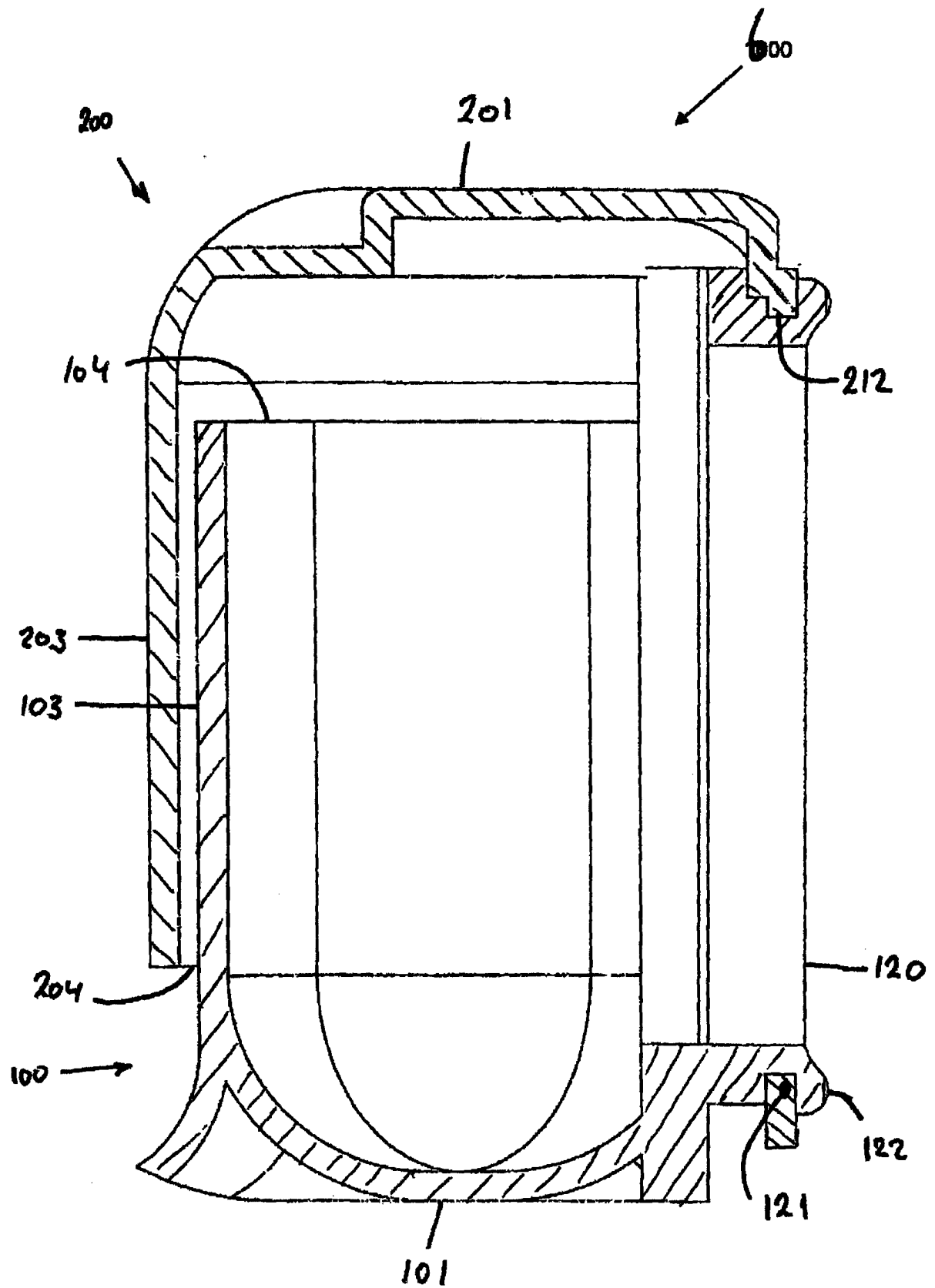
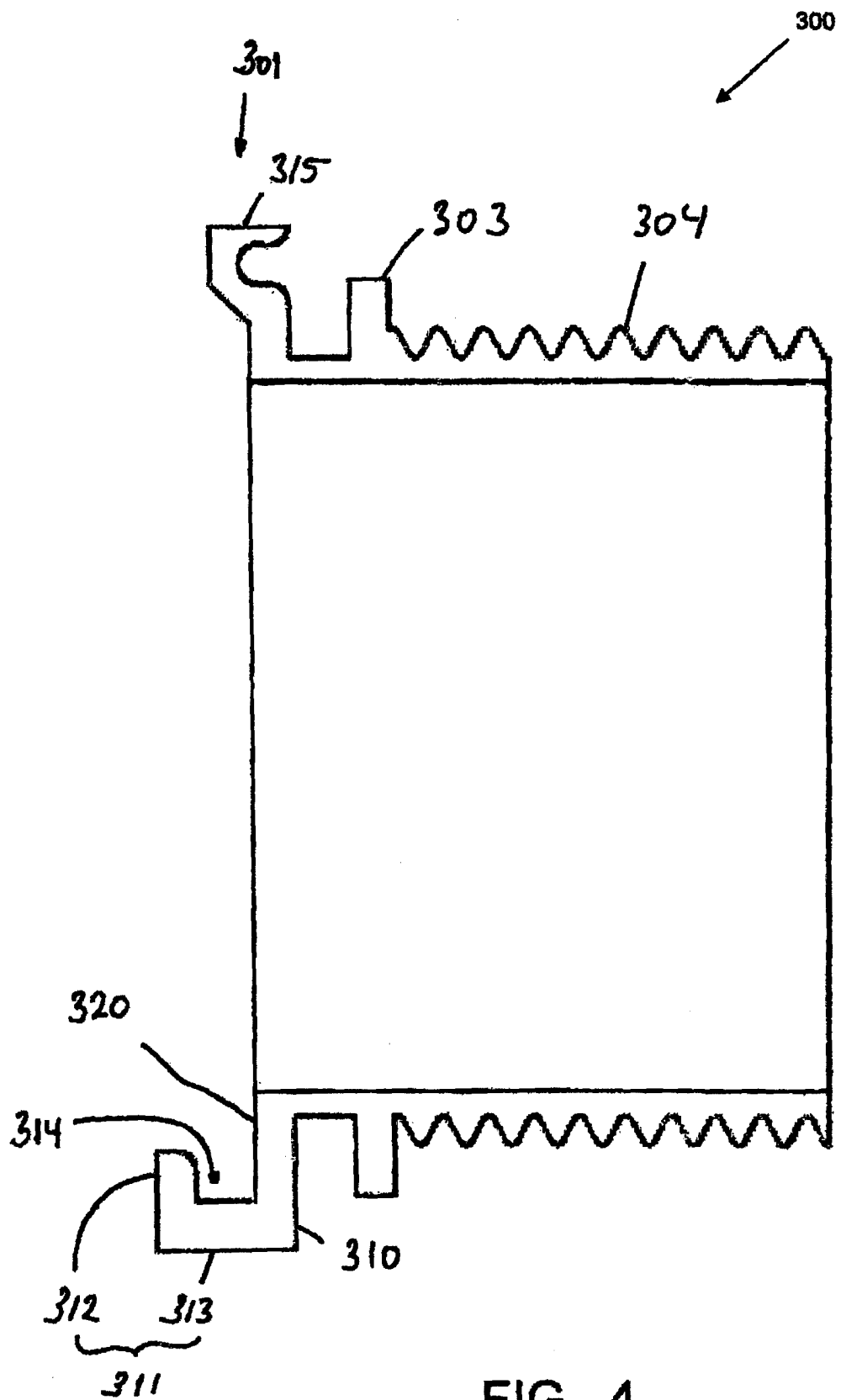


FIG. 3



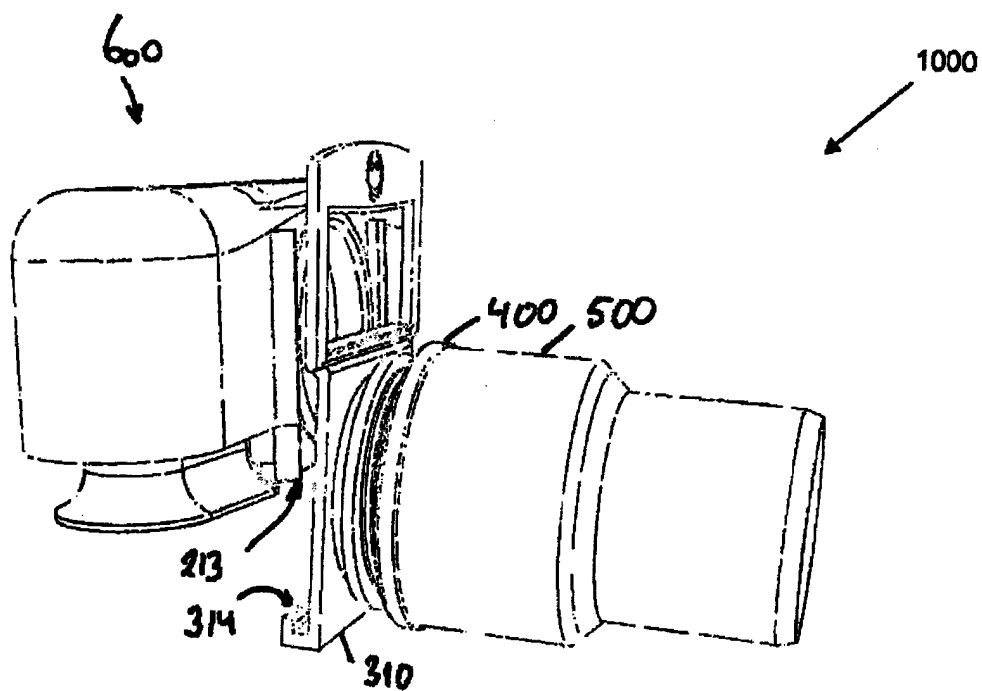


FIG. 5A

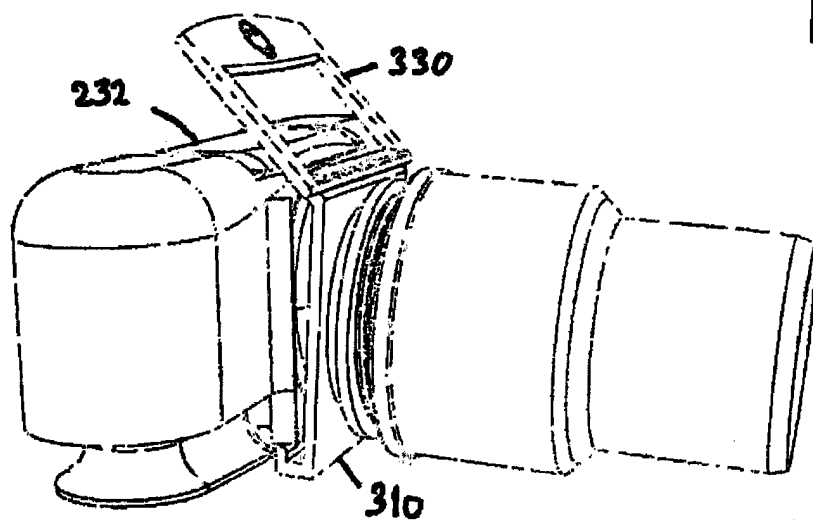


FIG. 5B

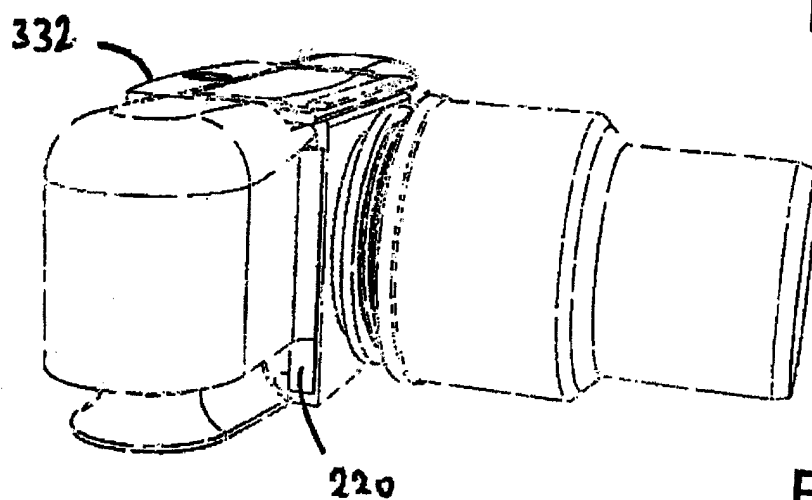


FIG. 5C

REFERENCES CITED IN THE DESCRIPTION

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