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(54) Moisture extraction device and wall provided with such a moisture extraction device

(57) The present invention relates to a moisture extraction device configured to extract moisture from a wall. The moisture extraction device comprises a tube, an inner wall and a central axis, in which tube a partition extends parallel to the central axis, with both long sides closely abutting against the inner wall of the tube. The moisture extraction device further comprises a closing device which is in contact with an end side of the partition and which partially closes the tube, defining a ventilation channel on either side of the partition, so that air can flow into the tube via one of the ventilation channels, into a first subchannel between the partition and the inner wall of the tube, to the other side of the partition into a second subchannel between a second surface of the partition remote from the first surface and the inner wall of the tube and out of the tube via the other ventilation channel. The tube has a circular cross-section.

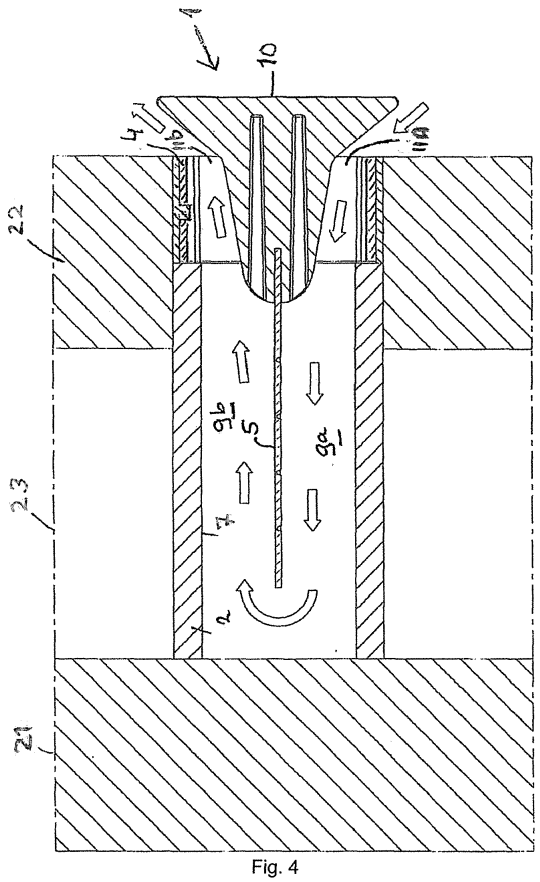

Fig. 4

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Description

[0001] The present invention, according to a first aspect thereof, relates to a moisture extraction device designed for extracting moisture from a wall, the moisture extraction device comprising a tube having a length L1, an inner wall and a central axis, in which tube a partition extends parallel to the central axis, with both long sides at least substantially closely abutting against the inner wall of the tube along a length L2<L1 in the tube, the moisture extraction device further comprising a closing device which is in contact with an end side of the partition, partially closing the tube at the corresponding short end, thereby defining at least one ventilation channel on either side of the partition, which ventilation channel is in communication with the interior of the tube, so that air can flow into the tube via one of the ventilation channels, into a first subchannel defined by a first surface of the partition and the corresponding part of the inner wall of the tube and subsequently, at the short end of the tube not closed by the closing device, to the other side of the partition into a second subchannel defined by a second surface of the partition remote from the first surface and the corresponding part of the inner wall of the tube and out of the tube via the other ventilation channel.

[0002] Such a moisture extraction device is known from BE 1010625A3. The known moisture extraction device has a tubular element of hardened clay of rectangular cross-section, whose outer circumference substantially corresponds to that of the front end of a brick, which element is placed in a rectangular recess in an outer wall of a cavity wall in use. A plate having a sealing surface whose outer circumference corresponds to the outer circumference of the tubular element partially closes a short end of the tube in use, leaving open a rectangular through hole in the centre thereof. The tubular element is placed in a wall by removing a brick from a brick wall and subsequently inserting the tubular element into the space in question and fixing it in the wall using mortar. In the case of relatively small, i.e. low bricks, for example so-called Waal bricks, part of a brick of a layer located below or above the aforesaid brick is additionally removed. In use, a rectangular frame is inserted into the rectangular through hole as well as a clock-shaped body provided with a partition which divides the tubular element into a left-hand subchannel and a right-hand subchannel, leaving open a ventilation channel between the frame and the bell-shaped body on the left-hand side and on the right-hand side of the clock-shaped body. In use, the tubular element is passed through an outer wall of a cavity wall, with the end opposite the framework abutting against an inner wall, so that the end in question is closed by the inner wall. When air flows into the tubular element through a ventilation channel and eventually out of the tubular element through the other ventilation channel, air in the tubular element is ventilated. If the wall is moist, the air in the tubular element will absorb moisture, as a result of which relatively moist air is continuously displaced by relatively dry air, which can in turn absorb air while present in the tubular element before being displaced again. BE 1010625 refers to NL 183148, published in 1983, which likewise discloses a moisture extraction device comprising a rectangular tubular element having dimensions that correspond to those of a brick.

[0003] A drawback of the known moisture extraction device is the fact that leakage flows develop in the tubular element in particular if the tubular element is made of a porous, moisture-permeable material, such as hardened clay. The reason is that the tubular element, which has been obtained by shortening a long clay tube produced by means of an extrusion process and subsequently allowing the clay to harden, has relatively large tolerances. The partition must therefore be made slightly narrower than the interior dimension of the tubular element, as a result of which leakage flows develop in use. Another drawback of the known device is that frequently the tubular element and the frame do not abut properly against the cavity in the wall, so that a gap must be filled with mortar.

[0004] Accordingly it is an object of the present invention, according to the first aspect thereof, to provide a moisture extraction device as described in the introduction wherein the extent to which leakage flows occur, and/or at least the risk of leakage flows, is/are reduced in comparison with the known moisture extraction device. According to the present invention this object is achieved in that the tube has a circular cross-section. A long tube having a circular cross-section has a greater resistance against deformation upon being shortened than a known tube having a rectangular cross-sectional shape, which is slightly compressed upon being shortened by means of a knife. The tolerances of the tubes according to the present invention are thus significantly smaller than in the case of the rectangular cross-sectional shape. This it has become possible to have a partition to be inserted into the tube correspond more precisely with the interior dimension of the tube, at least in the case of materials which do not automatically return to their original shape after being deformed. This results in a better abutment between the side edges of the partition and the inner wall of the tube, which in turn will result in smaller leakage flows, and/or a smaller risk of leakage flows, between the partition and the inner wall of the tube. In this way it is ensured, at least more effectively than with the known device, that a maximum amount of air will travel a route of maximum length through the tube, i.e., from one ventilation channel, through the first sub channel, along the entire length of the partition, and back again through the second sub channel and the other ventilation channel, and can thus absorb a maximum amount of moisture. In this way the advantage of the present invention is achieved.

[0005] Another advantage of the present invention is that it can be used both in a configuration in which the wall is a cavity wall and in a configuration in which the wall is a one-brick wall without a cavity. In the first case

the tube is preferably a length of pipe, whilst in the second case the tube may either be a length of pipe or be formed by the wall that surrounds the partition. In the case of a separate tube in the form of a length of pipe, the closing device may have an outer circumference that corresponds to that of the outer circumference of the tube, wherein the closing device abuts against the respective end side of the tube. In the case in which the wall forms the tube, the outer circumference of the closing device may correspond with the internal diameter of the tube, or in other words, the cylindrical hole in the wall, wherein an outer edge of the closing device closely abuts against the inner wall of the tube (wall).

[0006] In a preferred embodiment of the present invention, the tube is made of a porous, moisture-permeable material. The wall of the tube preferably prevents, at least substantially so, air flowing from the wall cavity into the tube, or conversely from the tube into the wall cavity. Preventing the occurrence of an air flow need not imply that no air can enter the tube from the wall cavity, or conversely. It does imply, however, that there is no possibility of a so-called gust of wind penetrating through the wall of the tube. The permeability to moisture of the tube contributes toward the discharge of moisture from the wall, because moisture can be transported from outside the tube to inside the tube through the permeable wall of the tube.

[0007] It is preferable in that regard if the tube is made of a ceramic material, preferably clay. Ceramic material, and in particular hardened clay, is highly suitable for use as a porous, moisture-permeable material which is capable of transporting moisture and which thus helps prevent the unimpeded passage of a strong air flow through the material.

[0008] In a moisture extraction device according to the present invention, it is preferable if the length L1, possibly augmented, if applicable, with a length L4 of the (cylindrical extended part of the) closing device in line with the tube, is greater than the thickness of bricks of an outer wall of a cavity wall in which the moisture extraction device is or at least is considered to be installed. Refer in this regard also to the discussion hereinafter of the second aspect of the present invention. The length L4 preferably substantially corresponds to the thickness of the outer wall in question plus the depth of the cavity. The end of the tube remote from the closing device can in that case be placed against the inner wall, whilst the end of the extended tubular part of the closing device remote from the tube substantially coincides with the outer surface of the outer wall. In the case of use in a cavity wall, the total length L1 plus L4 preferably ranges between 6 and 16 cm, preferably between 8 and 15 cm, even more preferably between 10 and 14 centimetres. In fact the dimension depends on the cavity wall in which the moisture extraction device is installed in use. In the Netherlands, pre-war cavity walls have a cavity of 3 to 5 cm, cavity walls dating from shortly after or a medium long period after the war have a cavity of 5 to 8 cm and late post-war (recent) cavity walls have a cavity of 10 to 13 cm. The tube is preferably 2-4 cm longer than the depth of the cavity in question, so that the tube is supported on the outer leaf of the wall along a length of 2-4 cm.

[0009] In a moisture extraction device according to the present invention, it is preferable if the length L1, possibly augmented, if applicable, with a length L4 of the (cylindrical extended part of the) closing device in line with the tube, is smaller than the thickness of bricks of a solid wall, or outer wall of a compound wall, in which the moisture extraction device is or at least is considered to be installed. Refer in this regard also to the discussion hereinafter of the third aspect of the present invention. In this case the total length L1 plus L4 preferably ranges between half and three quarters the thickness of the wall in question, preferably between 0.6 and 0.7 the thickness of the wall in question. It is conceivable that a cylindrical hole is provided in the wall, in which case the inner wall of the cylindrical hole can be regarded as the inner wall of the tube. The tube thus forms an integral part of the wall in that case. It is advantageous in that case to drill one hole having one diameter in the wall in which the closing device fits with a close fit, whether or not surrounded by a mounting tube. In this case the external diameter of the closing device is fractionally smaller than the internal diameter of the tube formed by the hole in the wall.

[0010] In a preferred embodiment, the closing device comprises an outer wall in which a recess is present, which recess extends in a path from an edge that faces the tube in use along part of the length of the outer wall of the closing device. This makes the removable installation of the closing device in a wall possible, with the closing device being secured against unintentional detachment from the wall in question by means of a bayonet-like lock.

[0011] With a view to providing an adequate lock it is preferable if said path extends at least substantially parallel to the central axis of the closing device over a first part thereof and perpendicular to the central axis and/or in the direction of the edge over a second part thereof.

[0012] The device preferably comprises a mounting tube having an internal diameter which corresponds to the external diameter of the outer wall of the closing device, such that the closing device can be moved into and out of the mounting tube with a close fit. Such a mounting tube makes for an easy installation of the moisture extraction device.

[0013] It is preferable in that regard if the mounting tube is provided with a projection on the inner wall, which projection is configured to be received in the recess in the outer wall of the closing device. This is a simple manner of providing a pin for the bayonet closure.

[0014] The present invention, according to a second aspect thereof, relates to a cavity wall provided with at least one moisture extraction device, preferably a multitude of moisture extraction devices. A wall provided with the known moisture extraction device experiences the

drawbacks described in the foregoing in relation to the first aspect of the invention. In order to offer a solution to the drawbacks, the invention provides a wall comprising an inner wall and an outer wall and a cavity having a depth D present therebetween, and at least one device installed in a hole in the outer wall for the moisture extraction device for extracting moisture from the wall, the moisture extraction device comprising a tube defining an air guide channel located between two ventilation channels extending in different directions, which tube has a length L1', an inner wall and a central axis, in which tube a partition extends parallel to the central axis, at least substantially closely abutting against the inner wall of the tube on both long sides along a length L2'<L1', wherein L1'>D, so that the tube on the one hand forms a sealing wall between the aforesaid hole and the surrounding cavity and on the other and extends in the outer wall along a length of at least L3< the thickness of the outer wall, which tube is partially closed by a closing device as defined in the first aspect of the invention, characterised in that the tube has a circular cross-section. The word "directions" in the phrase "two ventilation channels extending in different directions" is understood to mean two directions in which air flows through the ventilation channels. If the ventilation channels extend parallel to each other, for example, whilst air flows in opposite directions through the parallel channels in use, this falls within the meaning of "two ventilation channels extending in different directions". As a result of the reduced possibility of leakage flows occurring in the moisture extraction device, it will be possible to extract moisture from a wall more quickly and/or to a greater extent than in the case of a wall provided with a comparable number of known moisture extraction devices. A further advantage is the fact that forming a circular hole in a wall, for example by drilling, is significantly less laborious than forming a rectangular hole by removing a brick from a wall. As a result in a cavity wall from which moisture is to be extracted

[0015] The present invention, according to a third aspect thereof, relates to a wall configured as a one-brick wall, comprising at least one moisture extraction device installed in a hole in the outer wall for extracting moisture from the wall, the moisture extraction device comprising a cylindrical hole defining an air guide channel located between two ventilation channels extending in different directions, which hole has a length L4, an inner wall and a central axis, in which cylindrical hole a partition extends parallel to the central axis, at least substantially closely abutting against the inner wall of the tube on both long sides along a length L2"<L4, which cylindrical hole is partially closed by a closing device as defined in the first aspect of the invention. In this case the problem of an imprecise interior dimension of a tube having a rectangular cross-section does not occur, to be true. In this case a corresponding problem occurs regarding an imprecise interior dimension of a hole having a rectangular cross-section that has been or at least is to be provided in the wall. It is much easier to drill circular holes in a wall, and that with greater precision, than making rectangular recesses in a wall. It is preferable in that regard if a moisture extraction device according to the first aspect of the invention is installed in the hole.

[0016] If the closing device projects outward from the outer wall on the side remote from the tube, thus providing a projecting part between the two ventilation channels, wind flowing past the outer wall in question will be more easily guided into the tube via one of the ventilation channels. Thus a hole having a uniform diameter can be formed in a wall, into which first the tube and subsequently the closing device is placed. The closing device may abut against the tube with an end side of the (cylindrical) extended part, but the two may also be spaced some distance apart.

[0017] In a preferred embodiment of the present invention, the tube of the at least one moisture extraction device is immovably fixed in the wall, with the closing device being removably accommodated in the tube. This removability of the closing device makes it easy cleaning of the (tube of the) moisture extraction device possible.

[0018] The present invention will be explained in more detail below with reference to the appended drawing, in which:

Figure 1 is a perspective side view of a preferred embodiment of a moisture extraction device according to the present invention;
Figure 2 is a horizontal cross-sectional view through the central axis of the tube of the moisture extraction device of figure 1;
Figure 3 is a vertical cross-sectional view through the central axis of the tube of the moisture extraction device of figure 1;
Figure 4 is a horizontal cross-sectional view of the moisture extraction device of figures 1-3 installed in a cavity wall;
Figure 5 is a horizontal cross-sectional view through the axis of the tube of the moisture extraction device of figures 1-3 installed in a one-brick wall;
Figure 6 is a perspective view of a part of a closing device of a moisture extraction device according to the present invention;
Figure 7 is a perspective view of a mounting tube of a preferred embodiment of a moisture extraction device according to the present invention; and
Figure 8 is a horizontal cross-sectional view of a moisture extraction device with a mounting tube installed in a cavity wall.

[0019] In this document, unless explicitly stated otherwise, orientations are related to the position of use of the moisture extraction device, i.e. a tube horizontally installed in a wall, which comprises a partition that extends vertically within the tube. Referring to figures 1 - 3, a moisture extraction device 1, being an exemplary embodiment of a moisture extraction device according to the present invention, is shown in perspective view, hor-

izontal cross-sectional view and vertical cross-sectional view, respectively. The moisture extraction device 1 comprises a cylindrical tube 2 of dried clay having a length L1 of 10 cm, an internal diameter of 5.6 cm and an external diameter of 7.6 cm. The tube 2 is open at both ends, at one of the two ends, however, the tube 2 is partially closed by a closing device 3, in this case a CARE (ceramic air round element) brick. The closing device 3 has a cylindrical wall 4 whose outer circumference has a diameter of 7.6 cm, which wall is interrupted on opposite sides for providing an air channel. A diameter of 7.6 cm corresponds to the outer circumference of the tube 2, i.e. it is substantially aligned therewith. On the end side of the closing device 3 that faces the tube 2, a plate 5 of plastic material extends into the tube 3, forming a partition. The plate 5 has a width of 5.5 cm and thus closely abuts against the inner wall 7 of the tube 2 on its long sides 6a, 6b, extending along a length L2 of 9.5 cm through nearly the entire length of the tube 2. As such two subchannels 9a, 9b are formed in the interior of the tube 2. On the side remote from the plate 5, the closing device 3 has an end wall 8 which extends perpendicularly to a central axis of the cylindrical wall 4, from which end wall a wedge-shaped element 10 diverges away from the tube 2. Located between each of the two diverging sides and the cylindrical wall 4 of the closing device 3 is an opening of respective ventilation channels 11 a, 11b that extend through the closing device 3. The ventilation channel 11 a is in communication with the subchannel 9a and the ventilation channel 11b is in communication with the subchannel 9b. As such an air flow channel is formed, which channel extends from the ventilation channel 11 a to the subchannel 9a, via a space left open by the plate 5 in the tube 2, through the subchannel 9b and subsequently through the ventilation channel 11 b.

[0020] Figure 4 shows in horizontal cross-sectional view the moisture extraction device 1 of figures 1-3 installed in a wall comprising an inner wall 21, an outer wall 22 and a wall cavity 23 present therebetween. The wall cavity is represented as a cavity here, but it may just as well be filled with an insulation material. The space for the moisture extraction device 1 can be provided in a simple manner by drilling a hole having a diameter of 7.6 cm (in the case of the moisture extraction device 1 of the present embodiment), in the outer wall 22. An advantage of the circular cross-section is that a round hole for moisture extraction devices according to the present invention is easier to make than a rectangular hole as used for a moisture extraction device known so far. In this way the installation costs are reduced. The tube 2 can then be inserted into the hole until the leading end side of the tube 2 is at least largely closed by the inner wall 21. It is important that the tube 2 has a length greater than the depth of the cavity 23 and smaller than the depth of the cavity 23 plus the thickness of the outer wall 22. In this embodiment the sum of the length of the tube 2 and the length of the cylindrical wall 4 of the closing device 3 corresponds to the sum of the thickness of the outer wall 22 and the depth of the cavity 23. After the tube 2 has been inserted, the closing device 3 is moved into the cavity with the plate 5 aligned in vertical position until the end side of the cylindrical wall 4 of the closing device 3 comes into contact with the end side of the tube 2. By applying an adhesive sealant to the outer side of the cylindrical wall 4 prior to the insertion of the closing device 3 a strong sealed connection between the wall and the moisture extraction device 1 is obtained after the adhesive sealant has cured. When a wind flow occurs on the outer side of the outer wall 22, the wedge-shaped element 10 will guide air that flows past the outer wall 22 into a ventilation channel, in this case the ventilation channel 11a, in the tube 2, viz. into the subchannel 9a. The air is forced to follow the subchannel 9a up to the end of the tube 2 and is subsequently guided into the subchannel 9b at the end of the tube 2 via the inner wall 21 that closes the tube 2. At that location the air will flow back to the outer wall 22 and subsequently to the outside via the ventilation channel 11 b. This air flow is enhanced by the occurrence of a Venturi effect near the mouth of the ventilation channel 11b. The air flow is indicated by arrows in figure 4.

[0021] In the case of a moist wall, the inner wall 21, and thus the part of the inner wall 21 that closes the end side of the tube 2, will be moist. The tube 2, too, will absorb moisture on the outer side in that case, which moisture will spread over the entire thickness of the tube 2 as a result of the moisture-absorbing and moisture-transmitting property of the tube and will thus be transported to the inner wall 7 of the tube 2. At the inner wall 7 of the tube 2, moisture will be given off to the air in the tube 2. Said relatively moist air is continuously ventilated by the above-described air flow and replaced by relatively dry air. Thus a continuous moisture extraction process is provided. The direction of the wind is unimportant, because a reverse air flow will occur, with the same effect, of course, when the wind blows in the opposite direction.

[0022] There is of course a possibility of a leakage flow occurring in the moisture extraction device according to the invention, because the side edges 6a, 6b of the plate frequently do not fully seal against the inner wall 7 of the tube 2. The (average) leakage flow is significantly smaller than with the known device, however.

[0023] Figure 5 shows in horizontal cross-sectional view a moisture extraction device 31 according to the present invention installed in a one-brick wall 25. In the case of elements corresponding to elements shown in figures 1 - 4, the respective reference numerals have been incremented by 30 so as to avoid repeating a detailed introduction of elements. In this embodiment a cavity 24 has been drilled in the one-brick wall 25. The cavity 24 has a depth of 14 cm so that, also in this case, the 9.5 cm long plate 35 of the closing device 33 will extend inward into the cavity 24 to about 0.5 cm from the end of the cavity when the end wall of the closing device 33 is aligned with the outer side of the one-brick wall 25. A difference of the moisture extraction device 31 in com-

parison with the moisture extraction device 1 is that a separate tube is missing. The cavity 24 in the one-brick wall 25 performs the tube function is self. As a result, the plate 35 is wider than the plate 5 of the moisture extraction device 1, viz. just as wide as the external diameter of the cylindrical wall 34. The side edges 36a, 36b (not shown in figure 5) of the plate 35 thus abut closely against the inner wall of the cavity 24. The operation of the moisture extraction device 35 is in large measure similar to that of the moisture extraction device 1, with this difference that no transfer of moisture via a separate tube needs to take place.

[0024] With reference to figures 6 and 7, the figures show in perspective view a closing device 53 (figure 6) from which a partition that is provided in use has been left out, and a mounting tube 80 (figure 7) for use in an alternative embodiment of a moisture extraction device according to the present invention. In figure 6, those elements that correspond to comparable elements of the closing device 3 shown in figures 1-4 are indicated by a reference numeral that has been incremented by 50 in comparison with figures 1-4. In order to avoid repetition, not all the elements will be introduced anew here. The closing device 53 is different from the closing device 3 in that an L-shaped recess 62 is provided in the cylindrical wall 54 of the closing device 53, which recess initially extends from the end remote from the wedge 60 in a first path parallel to the central axis of the closing device 53 and subsequently perpendicular thereto. In figure 6 a mounting tube 80 is shown in perspective view. The mounting tube 80 has an inner wall 81 whose internal diameter is just sufficiently larger than the external diameter of the cylindrical wall 54 of the closing device 53 for sliding the mounting tube 80 over the cylindrical wall 54 of the closing device 53. A pin 82 projects inward from the inner wall 81, such that it is received in the recess 62 when the mounting tube 80 is moved over the closing device 53. In this way a bayonet-like lock is provided, which secures the closing device 53 against unintentional detachment from the mounting tube 80.

[0025] Figure 8 shows a view comparable to figure 4, with this understanding that in this case the mounting tube 80 and the closing device 53 are provided. Shown in horizontal cross-sectional view is a moisture extraction device 51 installed in a wall comprising an inner wall 71, an outer wall 72 and a wall cavity 73 present therebetween. The space for the moisture extraction device 51 can be provided in a simple manner by drilling a hole having a diameter that corresponds to the outer circumference of the mounting tube 80 in the outer wall 22. Subsequently the tube 52 can be moved into the hole until the leading end side thereof makes contact with the inner wall 71, so that the leading end side of the tube 52 is at least largely closed by the inner wall 71. Following that, the mounting tube 80 is inverted into the hole. In this embodiment the external diameter of the mounting tube 80 is the same as that of the tube 52, and the mounting tube 80 is pressed against the tube. Alternatively, the mounting tube may have a larger diameter, and a stepped hole may be provided in the outer wall 72. The mounting tube 80 furthermore need not directly abut against the tube 52. After insertion of the mounting tube 80 and the tube 52, the closing device 53 is moved into the cavity with the plate 52 aligned in vertical position until the end side of the cylindrical wall 54 of the closing device 53 comes into contact with the end side of the tube 52. In this case no adhesive sealant is applied to the outer side of the cylindrical wall 54, but the closing device 53 remains movable within the mounting tube 80. The aforesaid bayonet closure provides an adequate lock. The closing device 53 may be periodically removed from the mounting tube 80, so that any impurities that may be present in the tube 52, and thus in the ventilation channels 59a, 59b, can be removed from the tube. Subsequently the closing device 53 is put back into place again.

[0026] In the figures and the above description the invention has been explained by means of exemplary embodiments. It will be understood, however, that the figures and the description do not have a limitative effect on the scope of protection. Many variants, which may or may not be obvious to the skilled person, are conceivable within the scope of the present invention, which is defined by the appended claims. Dimensions and materials different from those mentioned in the examples may be used. In the case of cavity walls, it is possible to install a longer tube in the cavity, for example having a length that corresponds to the depth of the cavity and the thickness of the outer wall, wherein the closing device is installed in the tube with its cylindrical outer wall closely abutting against the inner wall of the tube. It is also possible to provide a one-brick with a hole having a stepped diameter, such that the closing device can be accommodated in a relatively wide part of the hole, with the leading end side abutting against a step of a part of the hole that has a relatively small diameter which corresponds to the width of the plate of the closing device.

Claims

1. A moisture extraction device designed for extracting moisture from a wall, the moisture extraction device comprising a tube having a length L1, an inner wall and a central axis, in which tube a partition extends parallel to the central axis, with both long sides at least substantially closely abutting against the inner wall of the tube along a length L2<L1 in the tube, the moisture extraction device further comprising a closing device which is in contact with an end side of the partition, partially closing the tube at the corresponding short end, thereby defining at least one ventilation channel on either side of the partition, which ventilation channel is in communication with the interior of the tube, so that air can flow into the tube via one of the ventilation channels, into a first subchannel defined by a first surface of the partition and the cor-

responding part of the inner wall of the tube and subsequently, at the short end of the tube not closed by the closing device, to the other side of the partition into a second subchannel defined by a second surface of the partition remote from the first surface and the corresponding part of the inner wall of the tube and out of the tube via the other ventilation channel, **characterised in that** the tube has a circular cross-section.

2. A moisture extraction device according to claim 1, **characterised in that** the tube is made of a porous, moisture-permeable material.

3. A moisture extraction device according to claim 2, **characterised in that** the tube is made of a ceramic material, preferably clay.

4. A moisture extraction device according to one or more of the preceding claims, **characterised in that** the length L1, possibly augmented, if applicable, with a length L4 of the closing device in line with the tube, ranges between 6 and 16 cm, preferably between 10 and 14 cm.

5. A moisture extraction device according to one or more of the preceding claims, **characterised in that** the closing device comprises an outer wall in which a recess is present, which recess extends in a path from an edge that faces the tube in use along part of the length of the outer wall of the closing device.

6. A moisture extraction device according to claim 5, **characterised in that** said path extends at least substantially parallel to the central axis of the closing device over a first part thereof and perpendicular to the central axis and/or in the direction of the edge over a second part thereof.

7. A moisture extraction device according to one or more of the preceding claims, **characterised in that** the device comprises a mounting tube having an internal diameter which corresponds to the external diameter of the outer wall of the closing device, such that the closing device can be moved into and out of the mounting tube with a close fit.

8. A moisture extraction device according to claim 7, in dependence on claim 5 or 6, **characterised in that** the mounting tube is provided with a projection on the inner wall, which projection is configured to be received in the recess in the outer wall of the closing device.

9. A wall comprising an inner wall and an outer wall and a cavity having a depth D present therebetween, and at least one moisture extraction device installed in a hole in the outer wall for extracting moisture from the wall, the moisture extraction device comprising a tube defining an air guide channel located between two ventilation channels extending in different directions, which tube has a length L1', an inner wall and a central axis, in which tube a partition extends parallel to the central axis, at least substantially closely abutting against the inner wall of the tube on both long sides along a length L2'<L1', wherein L1'>D, so that the tube on the one hand forms a sealing wall between the aforesaid hole and the surrounding cavity and on the other and extends in the outer wall along a length of at least L3< the thickness of the outer wall, which tube is partially closed by a closing device as defined in claim 1, **characterised in that** the tube has a circular cross-section.

10. A wall configured as a one-brick wall, comprising at least one moisture extraction device installed in a hole in the outer wall for extracting moisture from the wall, the moisture extraction device comprising a cylindrical hole defining an air guide channel located between two ventilation channels extending in different directions, which hole has a length L4, an inner wall and a central axis, in which cylindrical hole a partition extends parallel to the central axis, at least substantially closely abutting against the inner wall of the tube on both long sides along a length L2"<L4, which cylindrical hole is partially closed by a closing device as defined in claim 1.

11. A wall according to claim 9 or 10, **characterised in that** a moisture extraction device according to one of claims 1-3 is installed in the hole.

12. A wall according to claim 11, **characterised in that** the closing device, if dependent on claim 10, projects outward from the outer wall on the side remote from the tube, thus providing a projecting part between the two ventilation channels.

13. A wall according to claim 12, **characterised in that** the projecting part is wedge-shaped, with the point of the wedge directed toward the tube or the cylindrical hole.

14. A wall according to claim 12 or 13, **characterised in that** the closing device comprises a tubular part extending in line with the tube, wherein the tubular part of the closing device is at least substantially accommodated in the wall.

15. A wall according to one or more of claims 9 - 14, **characterised in that** the tube of the at least one moisture extraction device is immovably fixed in the wall, with the closing device being removably accommodated in the tube.

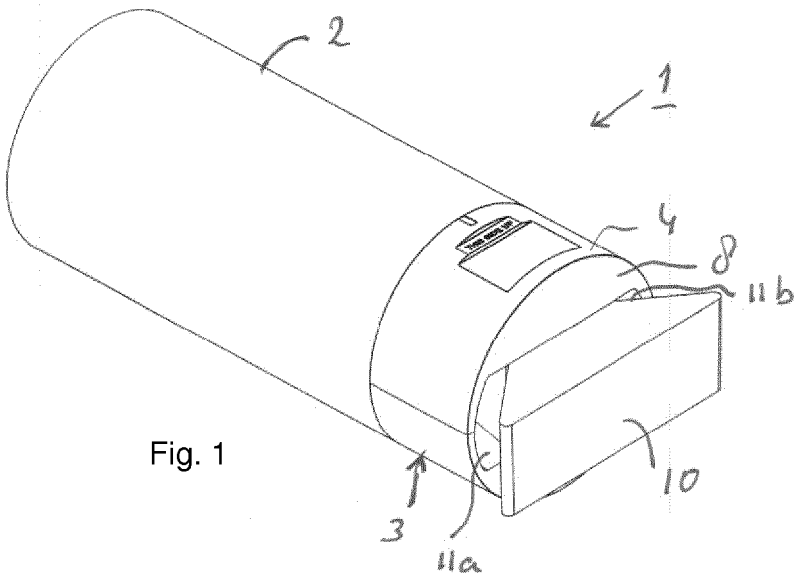

Fig. 1

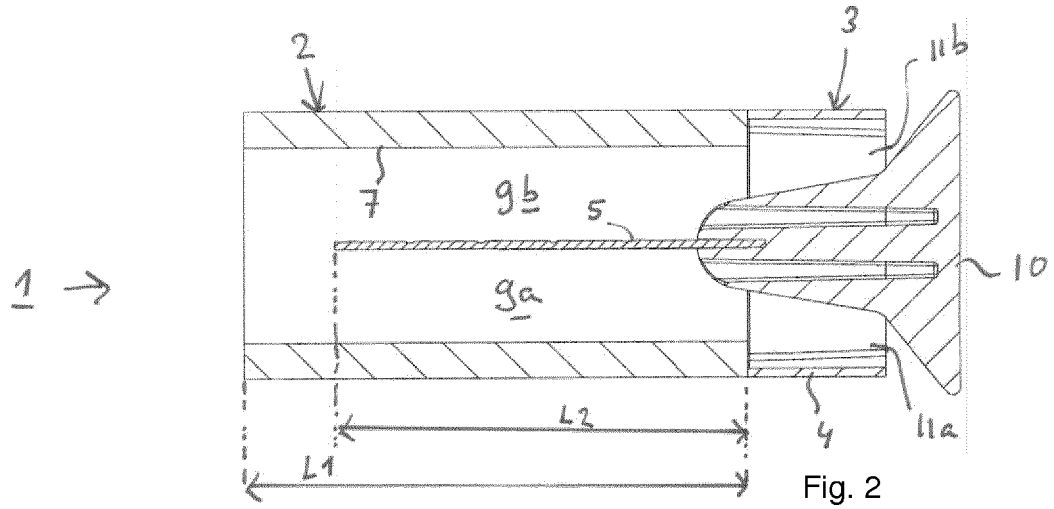

Fig. 2

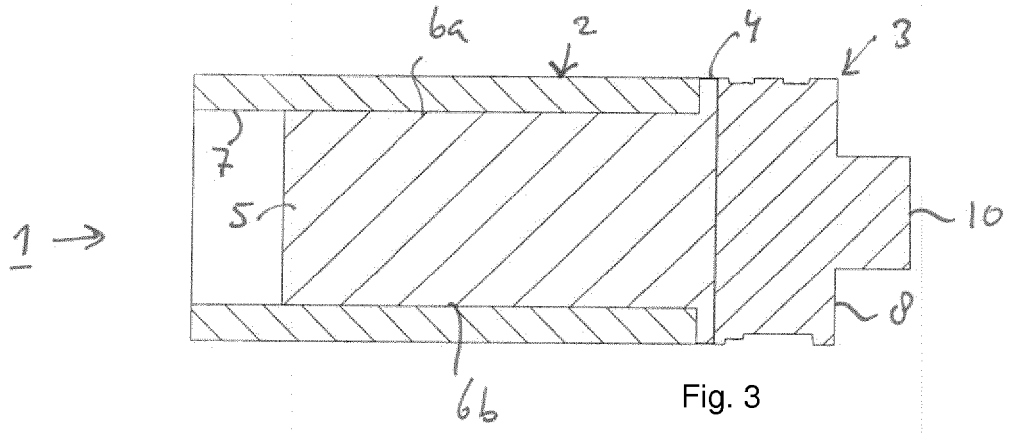

Fig. 3

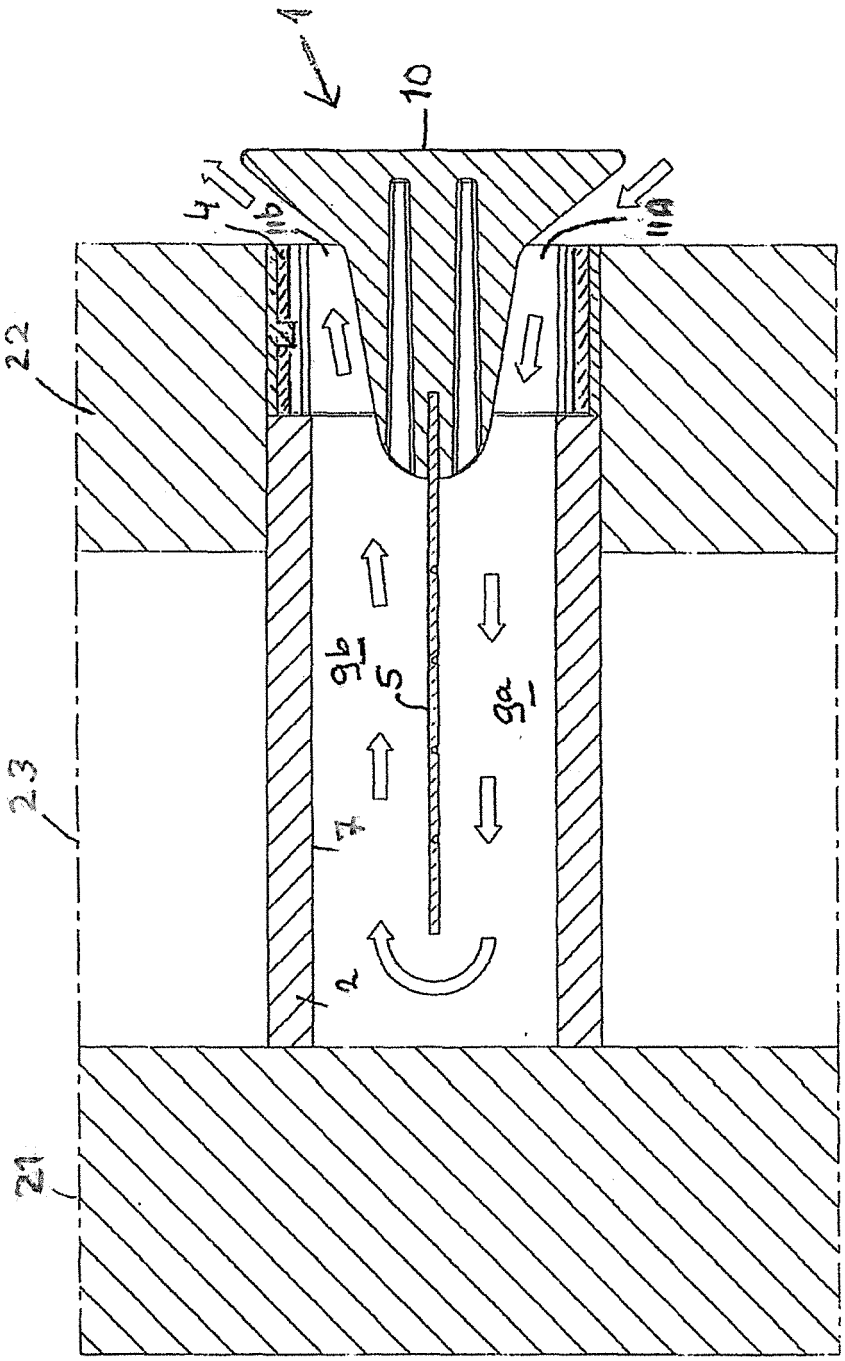

Fig. 4

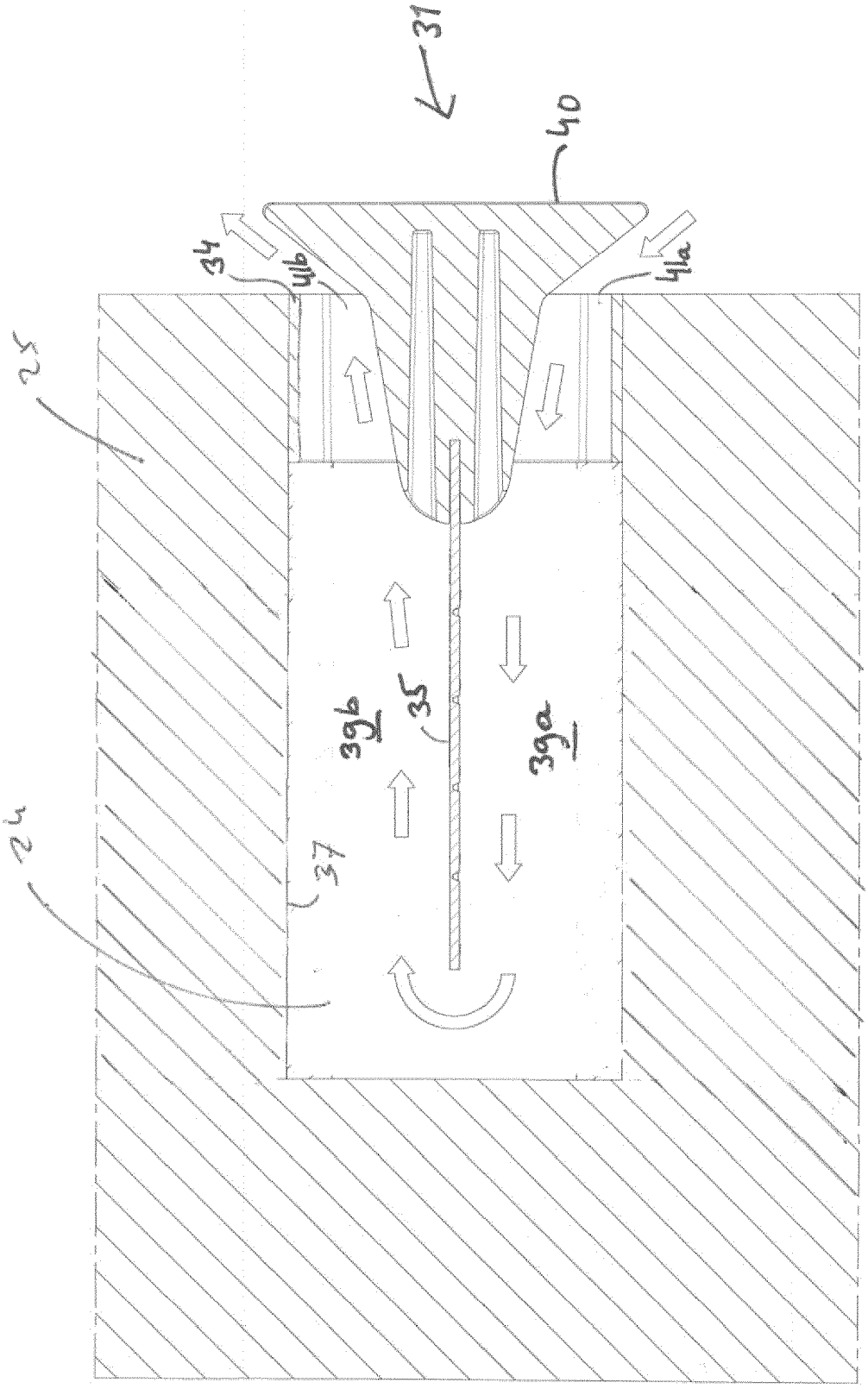

Fig. 5

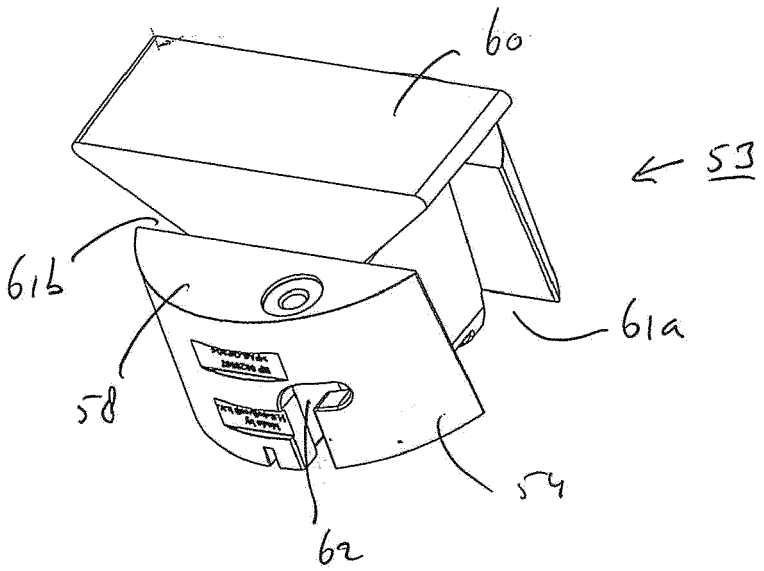

Fig. 6

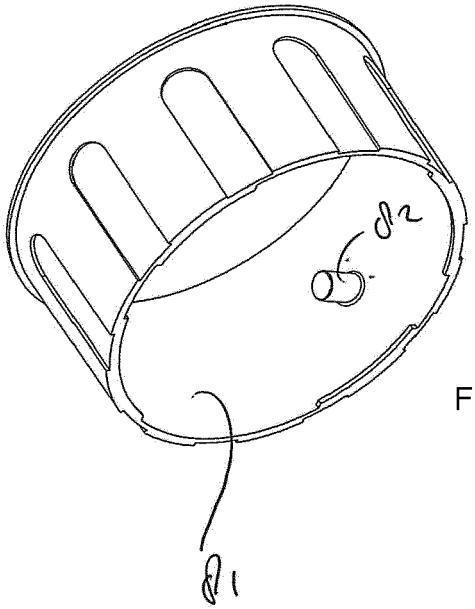

Fig. 7

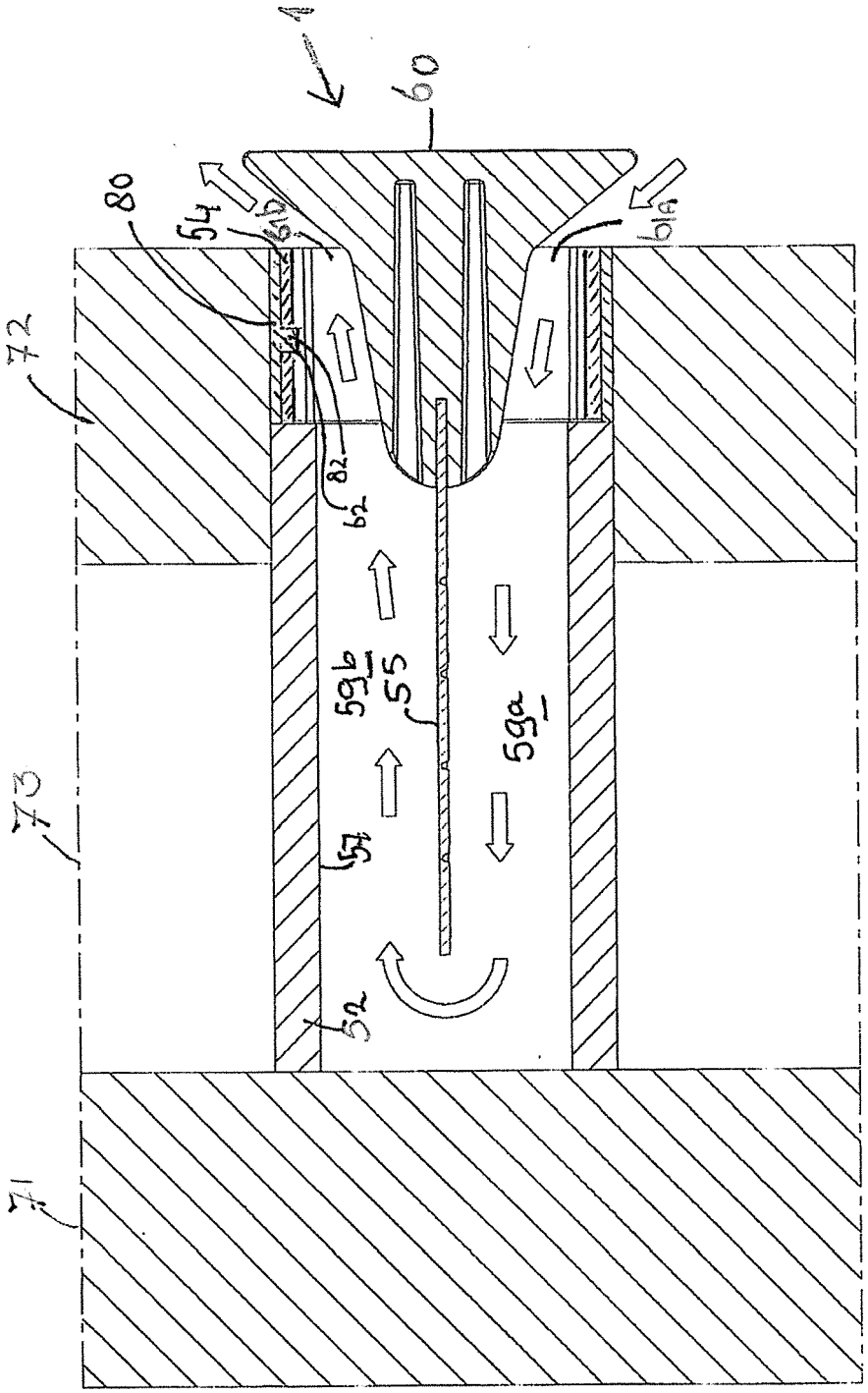

Fig. 8

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EUROPEAN SEARCH REPORT

Application Number
EP 15 15 4701

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	10 June 2015	Galanti, Flavio

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