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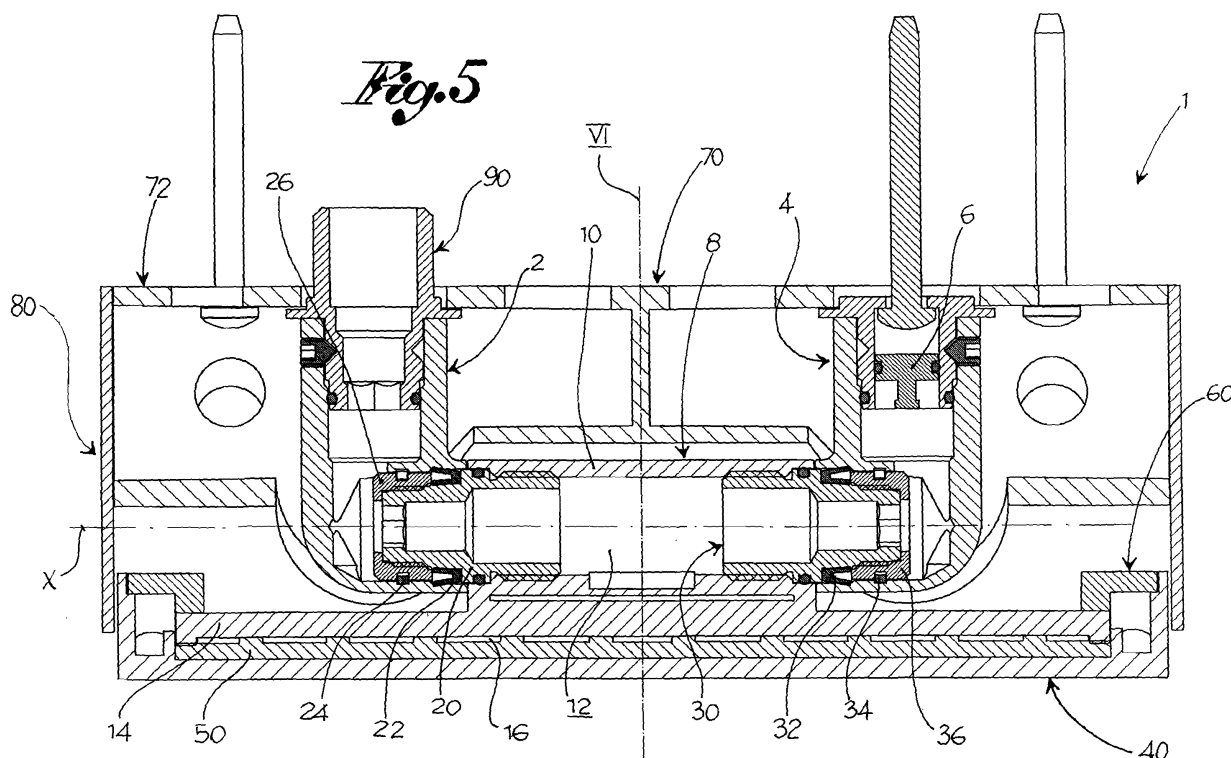
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(54) **Water spout**

(57) The present invention relates to a water spout (1) comprising a first support element (2), a second support element (4) and a main body (8) comprising a tubular body (10) and a distribution plate (14). Moreover, the

spout comprises a dispensing plate (40), coupled to the main body provided with a plurality of orifices (42) for dispensing water. The tubular body of the main body is turnably engaged with said support elements for orientating the orifices of the dispensing plate as desired.



Description

DESCRIPTION

[0001] The present invention relates to a water spout, in particular to be used in a shower unit, for example in a shower box.

[0002] One of the trends in the field of fixtures for shower boxes, that is, in the field of wall shower units, is to be provided with dispensing spouts, wherefrom water comes out, capable of dispensing a large jet, if compared to that normally dispensed by a traditional shower head. Usually, the jet is comprised of a plurality of fluid threads, each dispensed by a nozzle of the spout.

[0003] Especially in the field of shower boxes, such feature is greatly appreciated, as it allows obtaining jets that impinge the user's body, enclosing him/her and imparting a feeling of wellness.

[0004] For this reason, some known solutions envisage a spout provided with a plate provided with a plurality of nozzles, wherefrom the threads that make up the jet come out. The rectangular plate is supported by a box-shaped structure, so as to arrange inclined relative to the surface of the vertical wall where the box-shaped structure is connected, to direct the jet downwards, that is, towards the user.

[0005] However, in the embodiments that use such solution, the user is often forced to move into the shower box to intercept the water jet as desired, for example due to the height of the user him/herself, or due to the height at which the spout has been mounted; this leads to a disadvantage, especially if the often small dimensions of the usual boxes are taken into consideration.

[0006] The object of the present invention is to overcome the disadvantages mentioned above with reference to the prior art.

[0007] Such object is achieved by a spout made according to the following claim 1. The dependent claims describe embodiment variations.

[0008] The features and advantages of the water spout according to the present invention will appear more clearly from the following description, made by way of an indicative and non-limiting example with reference to the annexed figures, wherein:

[0009] - figure 1 shows a shower unit in an exemplary installation, comprising spouts according to the present invention, and in particular a top spout and two side spouts;

[0010] - figure 2 shows a perspective exploded view of the top spout;

[0011] - figure 3 shows a perspective front view of the top spout;

[0012] - figure 4 shows a perspective back view of the top spout;

[0013] - figure 5 shows a cutaway view of the top spout made according to the section plane V in figure 4;

[0014] - figure 6 shows a cutaway view of the top spout made according to the section plane VI in figure 5;

[0015] - figure 7 shows a cutaway view of the top spout, in a rotated configuration relative to that of figure 6;

[0016] - figure 8 shows a perspective exploded view of the side spout;

[0017] - figure 9 shows a perspective front view of the side spout;

[0018] - figure 10 shows a perspective back view of the side spout; and

[0019] - figure 11 shows a cutaway view of the side spout made according to the section plane XI in figure 10.

[0020] For clarity of explanation, a spout will be illustrated first in the following description, according to a first embodiment variation of the invention, called "top spout", and then a spout according to a second embodiment variation of the invention, called "side spout". However, it will be appreciated how a single inventive concept combines the two embodiment variations.

[0021] In an exemplary installation, illustrated in figure 1, a top spout 1 is generally arranged at a height from the floor level, coinciding with the surface whereon the shower user stands, higher than the average user's height, whereas a side spout 100 is generally arranged at a smaller height than the user's average height.

[0022] Both spouts are attached to the vertical wall W, for example coinciding with a wall of the bathroom or a wall of a shower box.

[0023] The top spout 1 comprises a first support element 2 and a second support element 4, spaced along an axis X. For example, the support elements 2, 4 are elbow elements.

[0024] According to a preferred embodiment, the first support element 2 is suitable for being associated to the household water mains and exhibits a through internal duct, so as to be crossed by water.

[0025] For manufacturing economy of the spout, the second support element 4 is preferably identical to the first support element 2 and is therefore internally crossed by a duct which, however, is closed by a cap 6.

[0026] Moreover, spout 1 comprises a main body 8 comprising a tubular body 10, which extends along said axis X and therein defines a feeding space 12, and a distribution plate 14, connected to the tubular body 10, having a recess 16 opposite the tubular body 10.

[0027] The main body 8 is preferably made in a single piece, for example by a moulding process.

[0028] The distribution plate 14 enlarges relative to the tubular body 10; in other words, recess 16 of the distribution plate extends axially to a greater extent than the axial extension of the feeding space 12 inside the tubular body 10.

[0029] The feeding space 12 is feedable with water and is in communication with recess 16 of the distribution plate 14 through special openings made in the distribution plate 14.

[0030] The tubular body 10 of the main body 8 is turnably engaged around axis X with said support elements 2, 4 for orientating the distribution plate 14 as desired and directing the water jet as desired.

[0031] According to a preferred embodiment, spout 1 comprises a first ferrule 20 sealingly engaged on one side to the tubular body 10 and on the other side to the first support element 2; the first ferrule is turnable relative to the first support element 2 and integral to the tubular body 10.

[0032] For example, the first ferrule 20 is partly inserted in the tubular body 10 and partly in the first support element 2 and made integral to the tubular body 10 through a threaded connection, whereas the seal with the first support element 2 is ensured by a seal 22 fitted on the ferrule.

[0033] To allow the passage of water from the first support element 2 to the feeding space 12, ferrule 20 is axially through pierced.

[0034] Preferably, moreover, the first support element 2 and the tubular body 10 are axially constrained for preventing relative axial sliding.

[0035] To this end, a snap ring 24 is fitted on ferrule 20, for example of the portion thereof inserted in the first support element 2, and engaged with the wall of the first support element 2.

[0036] According to a preferred embodiment, a bush 26 is screwed on ferrule 20, on the end inserted in the support element 2, and the snap ring 24 is inserted thereon.

[0037] For manufacturing economy, the engagement between the second support element 4 and the tubular body is obtained in a manner totally similar to what described above for the engagement between the first support element 2 and the tubular body 10.

[0038] In particular, preferably, spout 1 comprises a second ferrule 30, a second seal 32, a second snap ring 34 and a second bush 36.

[0039] Moreover, spout 1 comprises a dispensing plate 40, coupled to the main body 8 so as to cover recess 16 of the distribution plate 14.

[0040] The dispensing plate 40 is provided with at least one orifice 42 for dispensing water; preferably, the dispensing plate 40 is provided with a plurality of orifices arranged on an extended surface, for example rectangular, for example arranged in rows and columns.

[0041] According to a preferred embodiment, spout 1 comprises a membrane 50 of soft-touch material made in a single piece and comprising a flat body 52 and at least one pierced nozzle 54 protruding from the flat body 52.

[0042] The flat body 52 is overlapped to recess 16 of the distribution plate 14 to cover it, whereas nozzles 54 insert into the respective orifices of the dispensing plate 14.

[0043] The water that from the feeding space passes into recess 16 of the distribution plate 14 is therefore channelled from the flat body 52 of membrane 50 towards nozzles 54, wherefrom the threads that make up the jet come out.

[0044] Preferably, moreover, spout 1 comprises an annular frame 60 connectable to the dispensing plate 40;

the main body 8 is thus arranged between the annular frame 60 and the dispensing plate 40, whereas membrane 50 remains arranged between the distribution plate 14 of the main body 8 and the dispensing plate 40.

[0045] Preferably, the top spout 1 further comprises a support structure 70 that supports the main body 8, suitable for being fixed to wall W.

[0046] The support structure 70 comprises a back face 72 intended for resting against the wall and a front face 74 parallel to axis X and inclined relative to the back face 72 for directing the dispensed jet downwards.

[0047] In other words, when the main body is engaged with the support structure 70 and is in the non/rotated configuration, the distribution plate 14 of the main body 8, and thus the dispensing plate 40 integral thereto, substantially arrange parallel to the front face 72 of the support structure, so that the jet is dispensed downwards.

[0048] Preferably, the support structure 70, on the back face 72, comprises guiding elements 76, 78 where-with the support elements 2, 4 engage for correctly positioning the main body 8.

[0049] For example, said guiding elements 76, 78 are ring elements that couple with a shape coupling with the support elements 2, 4.

[0050] Preferably, moreover, spout 1 comprises a cover 80 suitable for being inserted on the support structure 70 for hiding it to sight.

[0051] Preferably, moreover, spout 1 comprises a tubular feeding extension 90, placed in communication with the feeding space 12 of the tubular body 10 and partly protruding from the support structure 70 to be easily connectable to the water mains.

[0052] In particular, the tubular extension 90 engages with the first support element 2, on the side opposite that engaged with ferrule 20.

[0053] Figures 8 to 11 illustrate a side spout 100, according to an embodiment variation of the dispensing spout according to the present invention. In such figures, the same reference numerals used in the previous figures are used to indicate similar parts.

[0054] In particular, spout 100 comprises a support structure 170, box shaped, that supports the main body 8, suitable for being built in wall W.

[0055] In the back face, which is built in the wall, the support structure 170 exhibits a box-shaped body 172, wherein the tubular body 10 is seated, provided with holes 174, 176 for fastening the support elements 2, 4.

[0056] In the case of a spout 100 built in a shower, the support structure 170 can be fastened to the wall by fastening tabs 210, 220.

[0057] Innovatively, the spout according to the present invention allows obtaining an adjustable and enclosing jet.

[0058] For example, in the case of an installation with one top spout and two side spouts, the top jet is adjustable so as to adapt to more or less tall users, and the side jets as well are adjustable to converge on the user.

[0059] Advantageously, the spout according to the

present invention exhibits a compact structure, particularly useful in the base of building into shower boxes.

[0060] According to a further advantageous aspect, the spout according to the present invention is manufacturable at a low cost, sometimes reusing similar parts in different functions.

[0061] It is clear that a man skilled in the art may make several changes and variations to the spout described above.

[0062] For example, according to an embodiment variation, the ferrule is fixed relative to the support element and turnable in the tubular body.

[0063] According to a further embodiment variation, the seal is arranged between the ferrule and the tubular body wall.

[0064] According to an even further embodiment variation, the top spout is actually used as side spout and vice versa.

[0065] Also such alternative embodiments are to be deemed as comprised in the scope of protection as defined by the following claims.

Claims

1. Water spout (1, 100), comprising:

- a first support element (2) and a second support element (4), spaced along an axis (X);
- a main body (8) comprising

- a) a tubular body (10), which extends along said axis (X) and therein defines a feeding space (12), and
- b) a distribution plate (14), connected to the tubular body, having a recess (16) opposite the tubular body;

wherein the feeding space is feedable with water and is in communication with the recess of the distribution plate;

- a dispensing plate (40), coupled to the main body so as to cover the recess of the distribution plate, said dispensing plate being provided with at least one orifice (42) for dispensing water;

wherein the tubular body of the main body is turnably engaged around axis (X) with said support elements for orientating the orifices of the dispensing plate as desired.

2. Spout according to claim 1, comprising a first ferrule (20) sealingly engaged on one side to the tubular body and on the other side to the first support element, said ferrule being turnable relative to said support element or said tubular body.

3. Spout according to claim 2, wherein the first ferrule

is integral to the tubular body and turnable relative to the first support element.

4. Spout according to claim 3, wherein the first ferrule is integrally engaged to the tubular body by a threaded connection.

5. Spout according to any one of claims 2 to 4, comprising at least one seal (22) engaged with the ferrule for obtaining a seal between the ferrule and the wall of the tubular body or of the first support element.

6. Spout according to any one of claims 2 to 5, wherein the first ferrule is partly inserted into the tubular body.

7. Spout according to any one of claims 2 to 6, wherein the first ferrule is partly inserted into the first support element.

8. Spout according to any one of the previous claims, wherein the first support element and the tubular body are axially constrained for preventing relative axial sliding.

9. Spout according to claim 8 and according to any one of claims 2 to 7, comprising a snap ring (24) engaged with the ferrule and with the support element or the tubular body, for preventing relative axial sliding between the ferrule and the support element or the tubular body.

10. Spout according to any one of the previous claims, wherein the first support element is associable to the water mains and internally hollow for allowing the water feeding to the feeding space of the tubular body.

11. Spout according to claim 10 and according to any one of claims 2 to 9, wherein said ferrule is through pierced for obtaining a fluid communication between the support element and the tubular body.

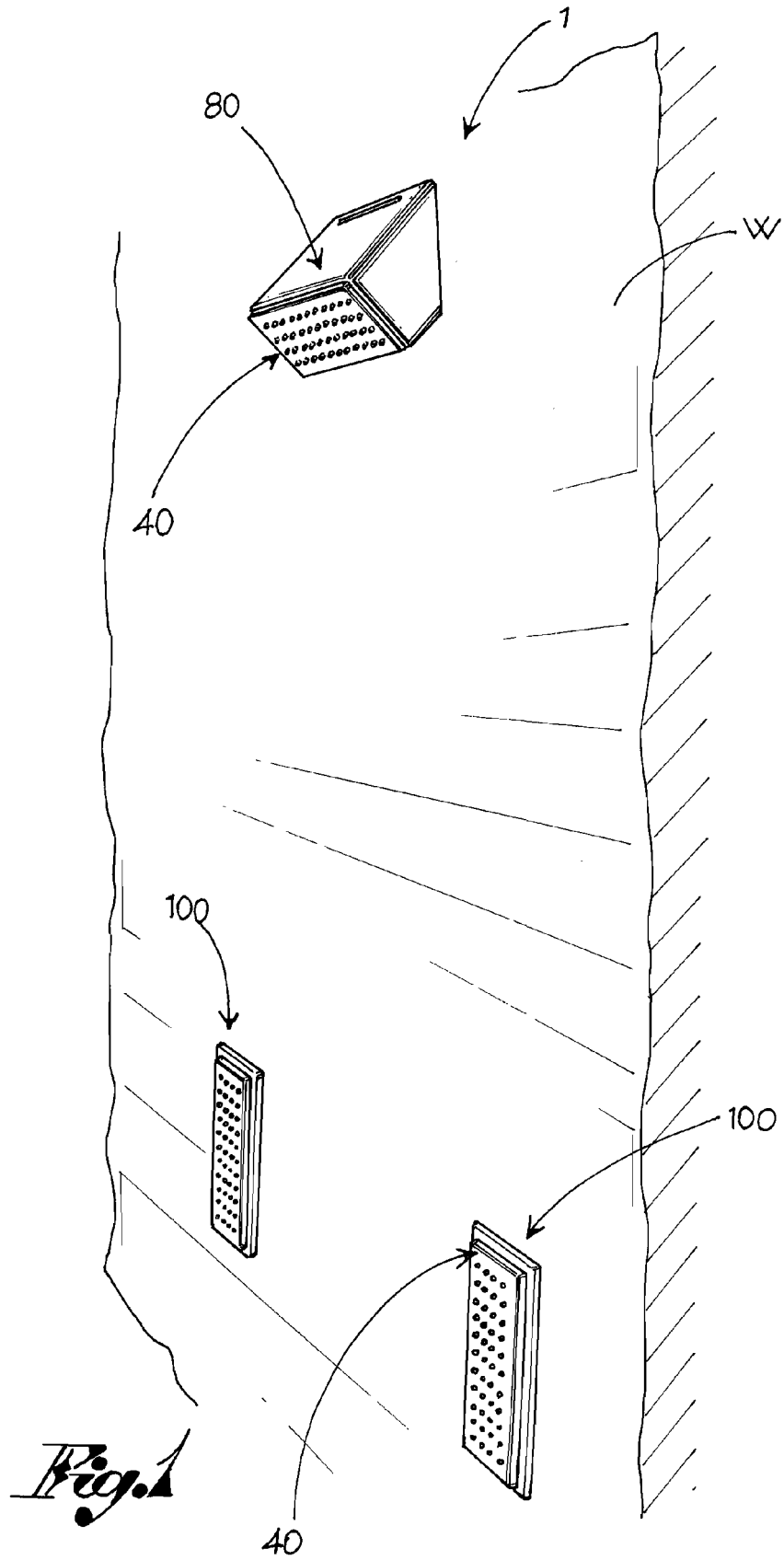
12. Spout according to any one of claims 2 to 11, comprising a second ferrule (30) engaged on one side to the tubular body and on the other side to the second support element, said ferrule being turnable relative to said second support element or said tubular body.

13. Spout according to claim 12, wherein the second ferrule is integral to the tubular body and turnable relative to the second support element.

14. Spout according to claim 13, wherein the second ferrule is integrally engaged to the tubular body by a threaded connection.

15. Spout according to any one of claims 12 to 14, com-

- prising at least one seal (32) engaged with the second ferrule for obtaining a seal between the second ferrule and the wall of the tubular body or of the second support element.
16. Spout according to any one of claims 12 to 15, wherein the second ferrule is partly inserted into the tubular body.
17. Spout according to any one of claims 12 to 16, wherein the second ferrule is partly inserted into the second support element.
18. Spout according to any one of claims 12 to 17, wherein the second support element and the tubular body are axially constrained for preventing relative axial sliding.
19. Spout according to claim 18 and according to any one of claims 12 to 17, comprising a snap ring (34) engaged with the second ferrule and with the second support element or the tubular body, for preventing relative axial sliding between the second ferrule and the second support element or the tubular body.
20. Spout according to any one of the previous claims, comprising a membrane (50) of soft-touch material made in a single piece and comprising a flat body (52) and at least one pierced nozzle (54) protruding from the flat body, said flat body being overlapped to the recess of the distribution plate for covering it and said nozzle being inserted in the orifice of the dispensing plate.
21. Spout according to any one of the previous claims, wherein said dispensing plate exhibits a plurality of orifices.
22. Spout according to any one of the previous claims, comprising an annular frame (60) connectable to the dispensing plate, said main body being arranged between the annular frame and the dispensing plate.
23. Spout according to any one of the previous claims, comprising a support structure (70) that supports the main body, wherein said support structure is suitable for being fastened to a wall (W) and comprises a back face (72) intended for resting against the wall and a front face (74) parallel to the axis (X) and inclined relative to the back face for directing the dispensed jet downwards.
24. Spout according to claim 23, comprising a cover (80) suitable for being inserted on the support structure for hiding it to sight.
25. Spout according to any one of claims 1 to 22, comprising a support structure (170) that supports the main body, wherein said structure is suitable for being built in a wall (W).
26. Spout according to any one of the previous claims, comprising a tubular feeding extension (90) in communication with the feeding space of the tubular body and partly protruding from the support structure (70, 170) to be easily connectable to the water mains.
27. Shower box comprising at least one spout made according to any one of the previous claims.



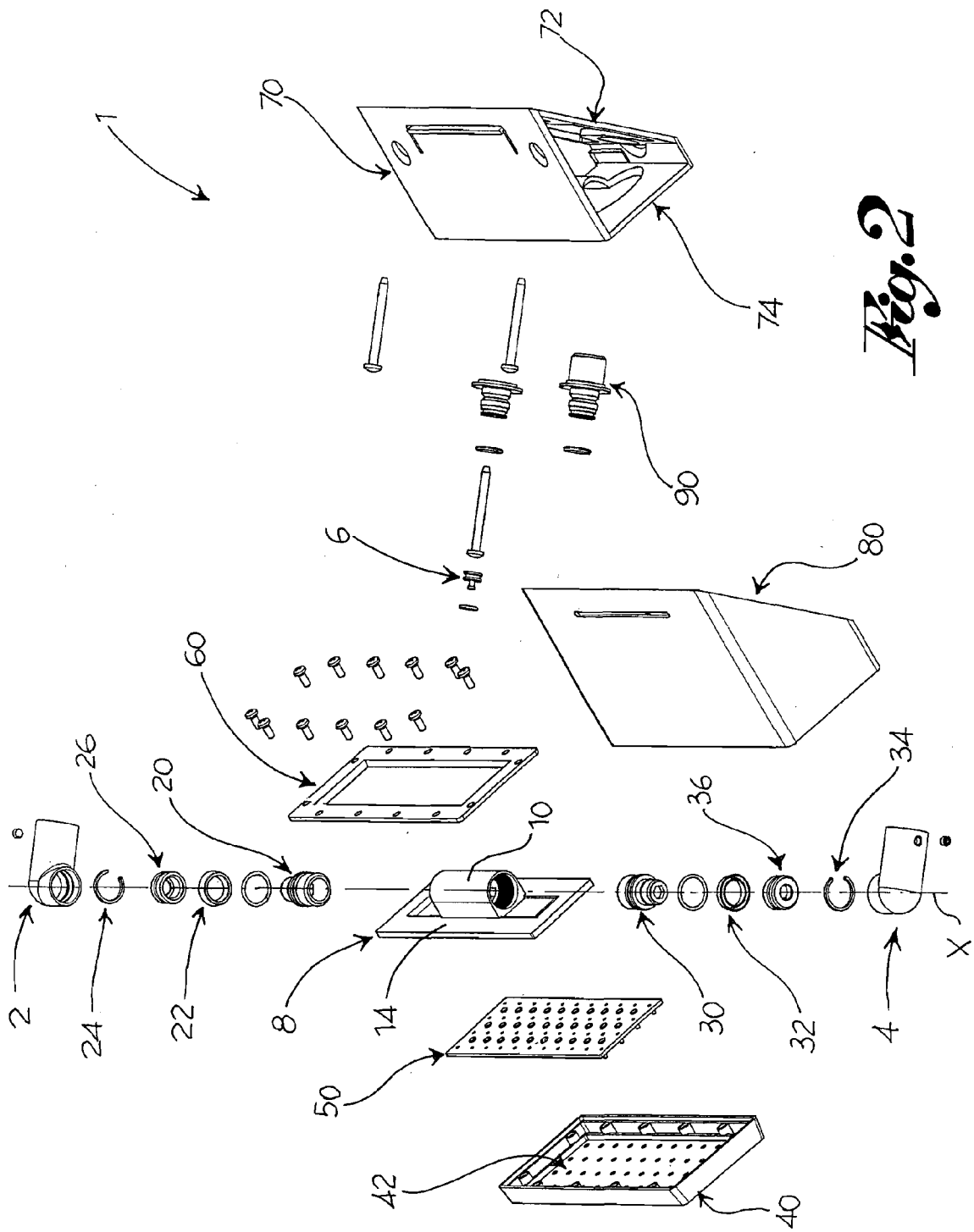
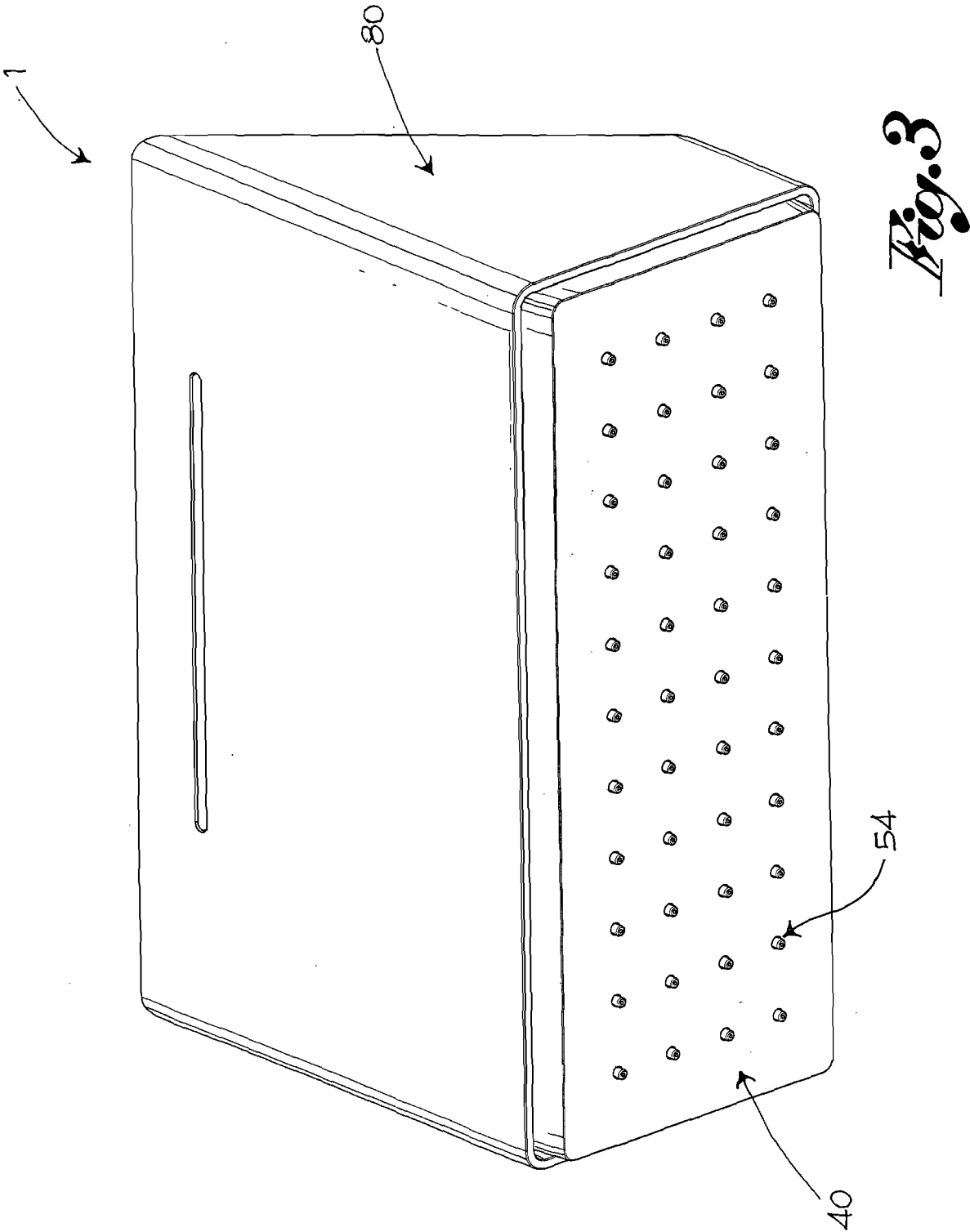
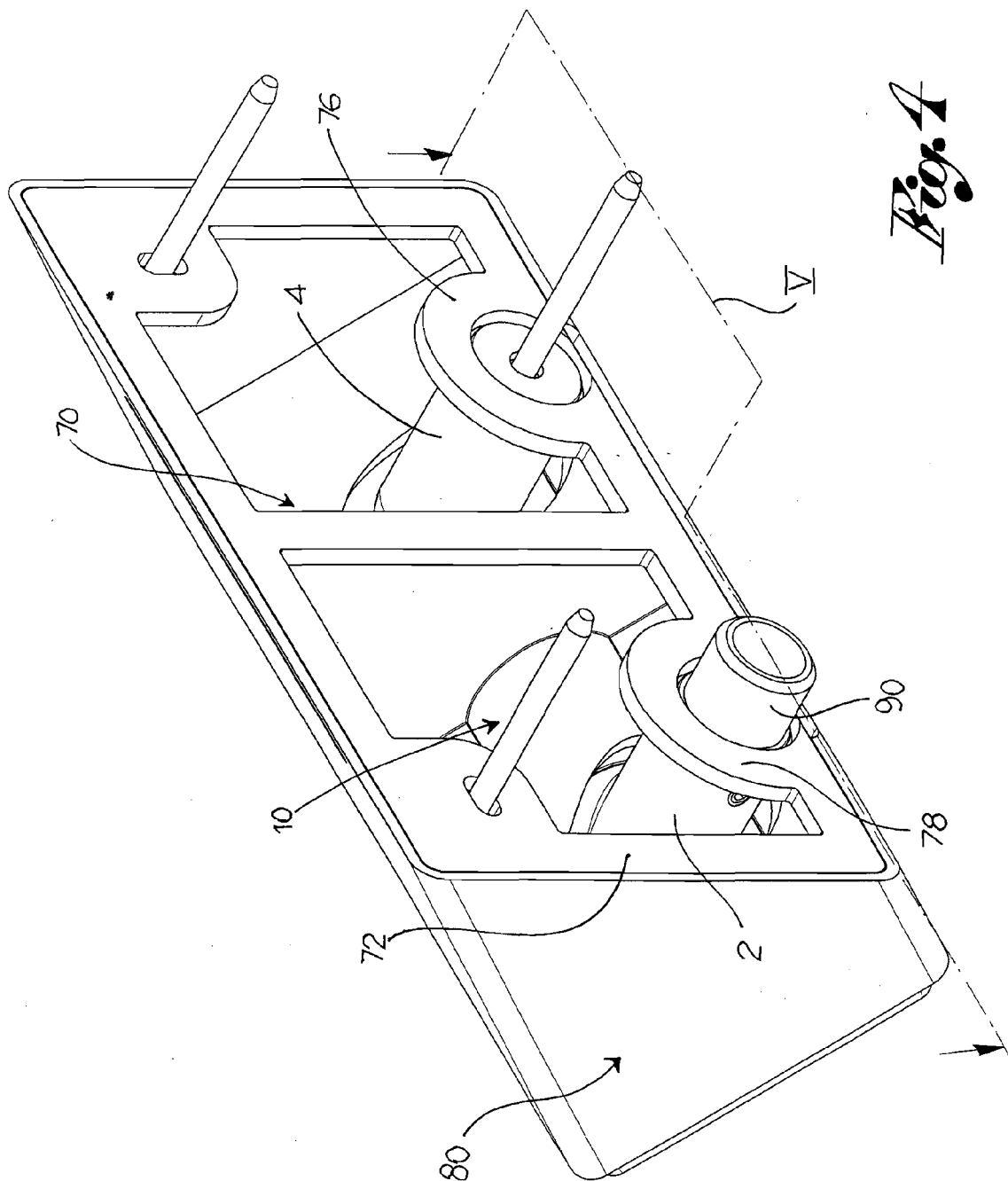
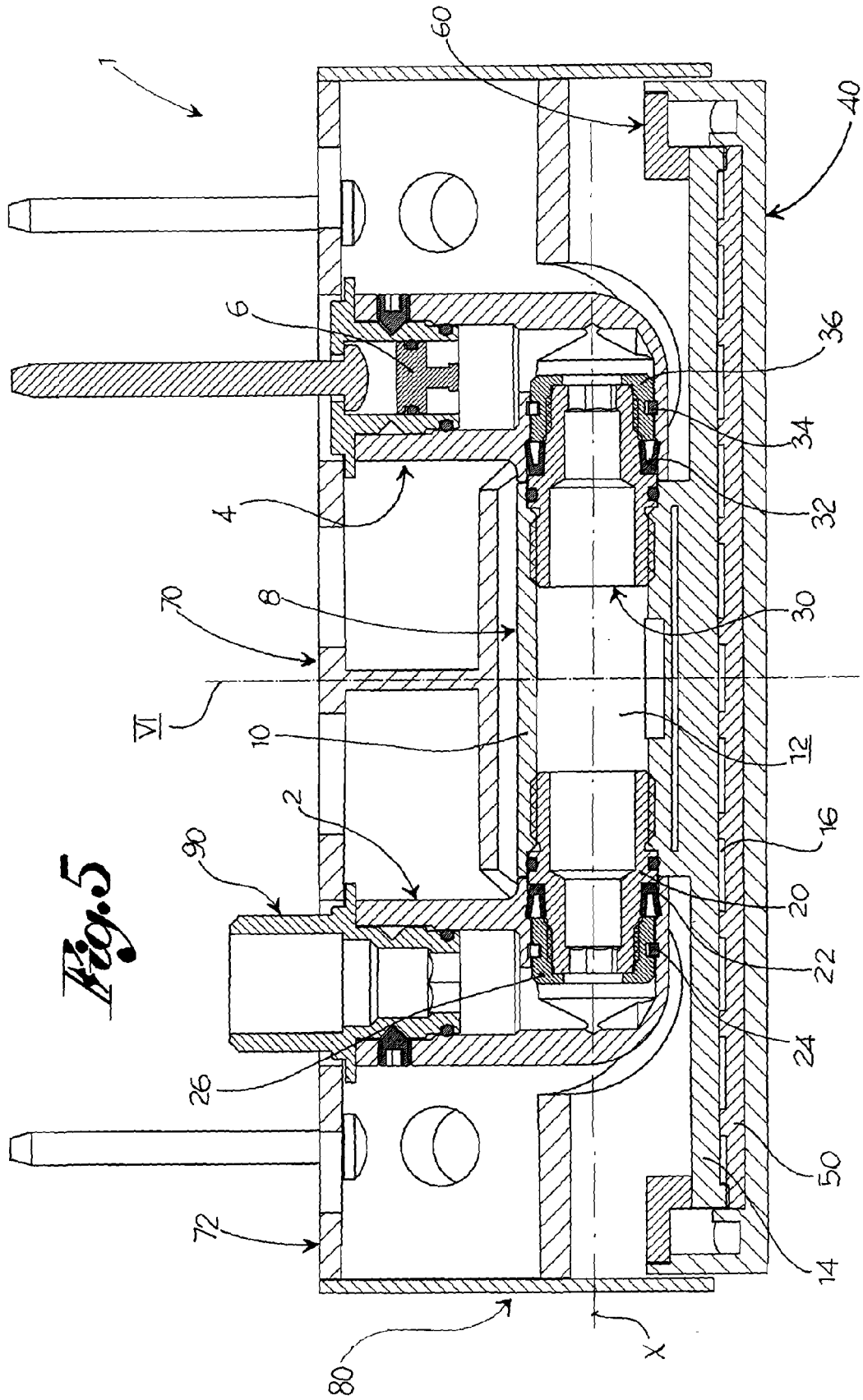


Fig. 2







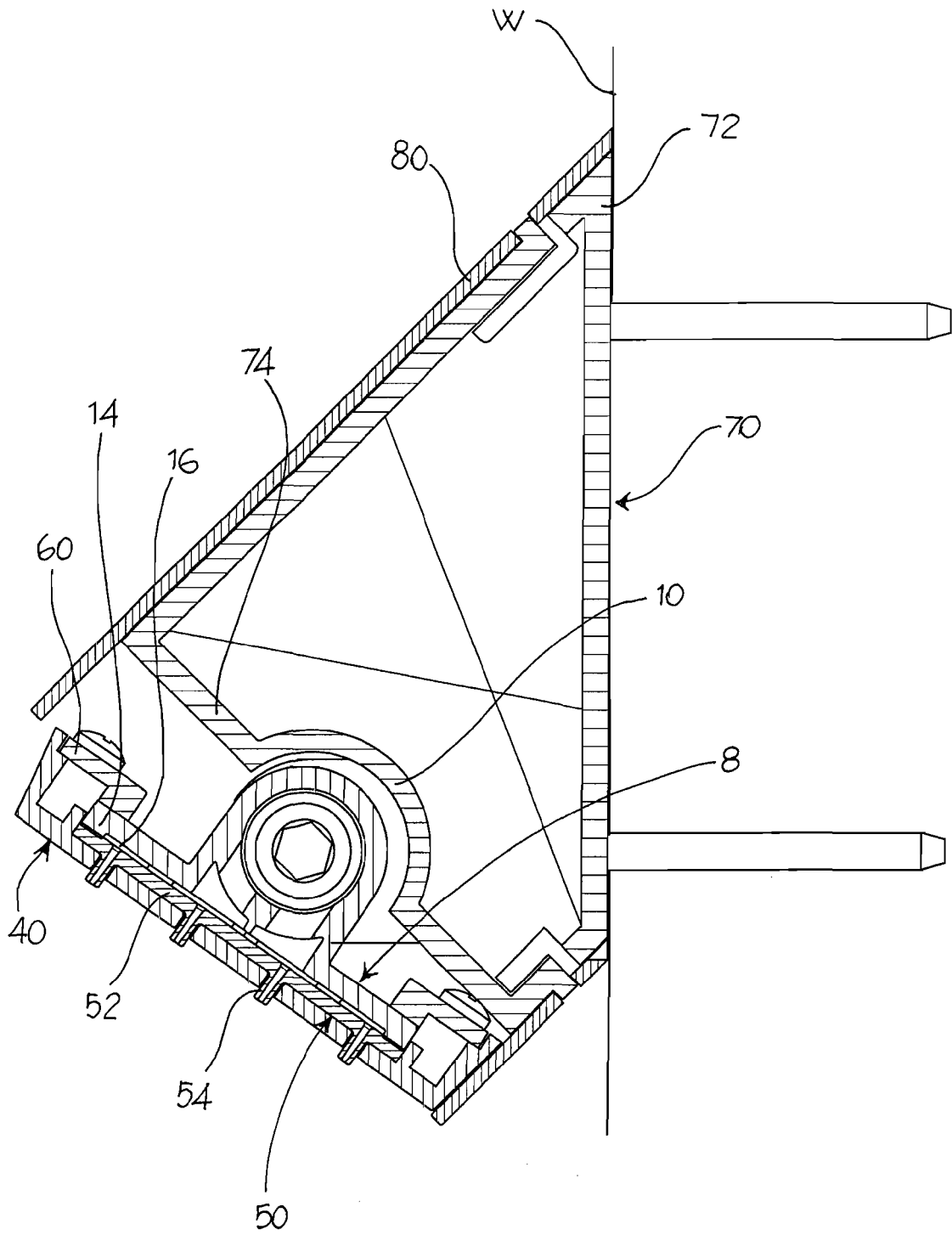


Fig. 6

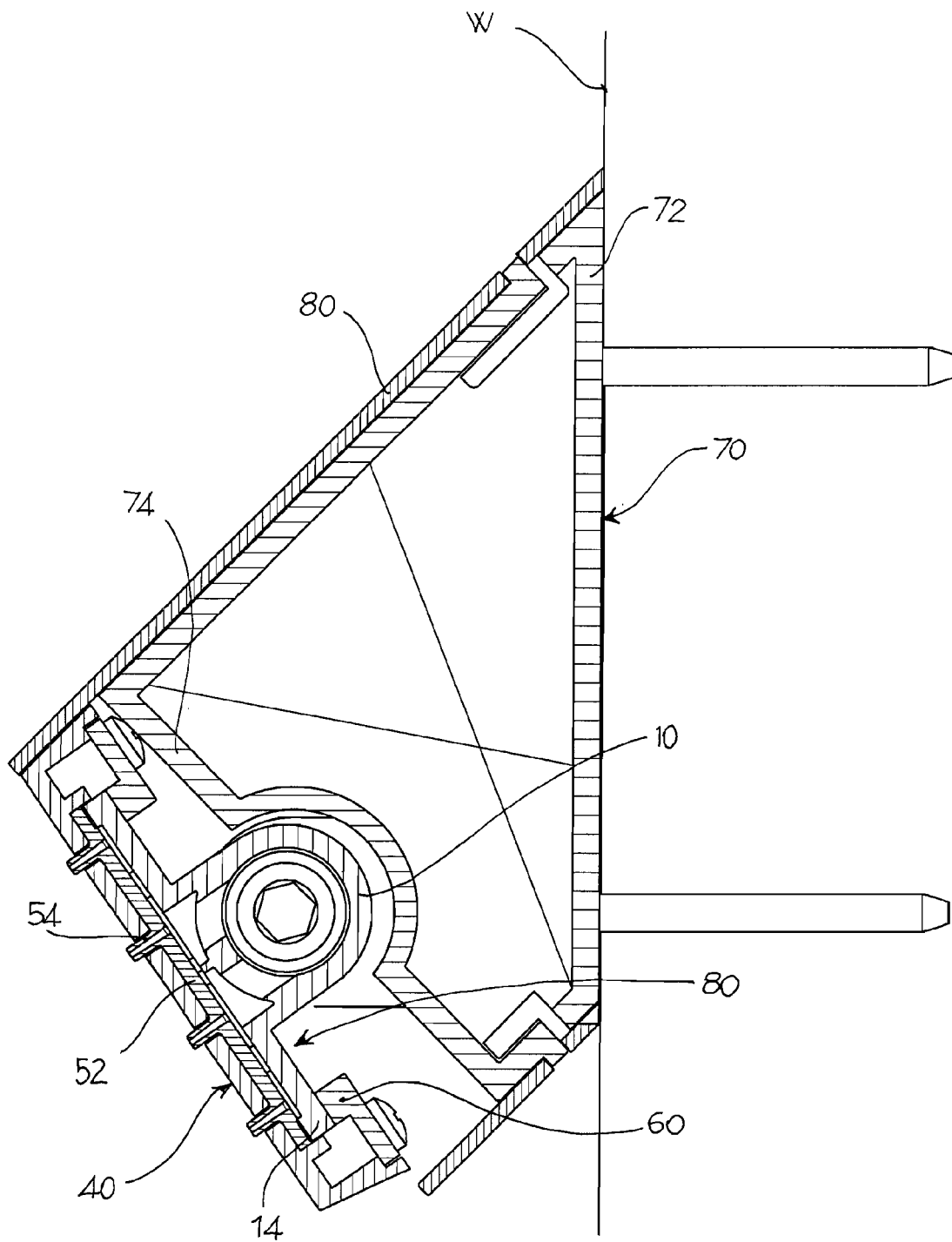
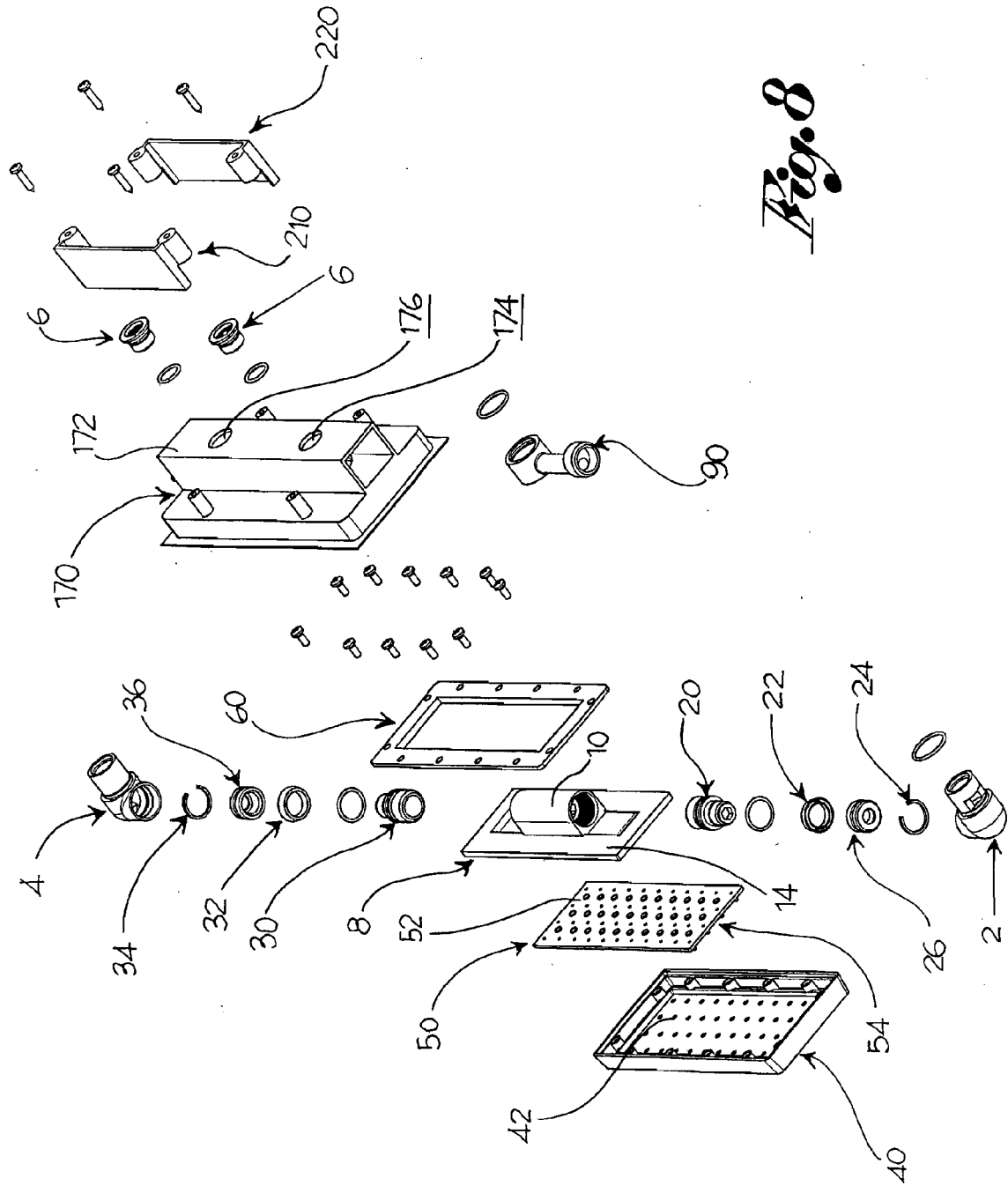


Fig. 7



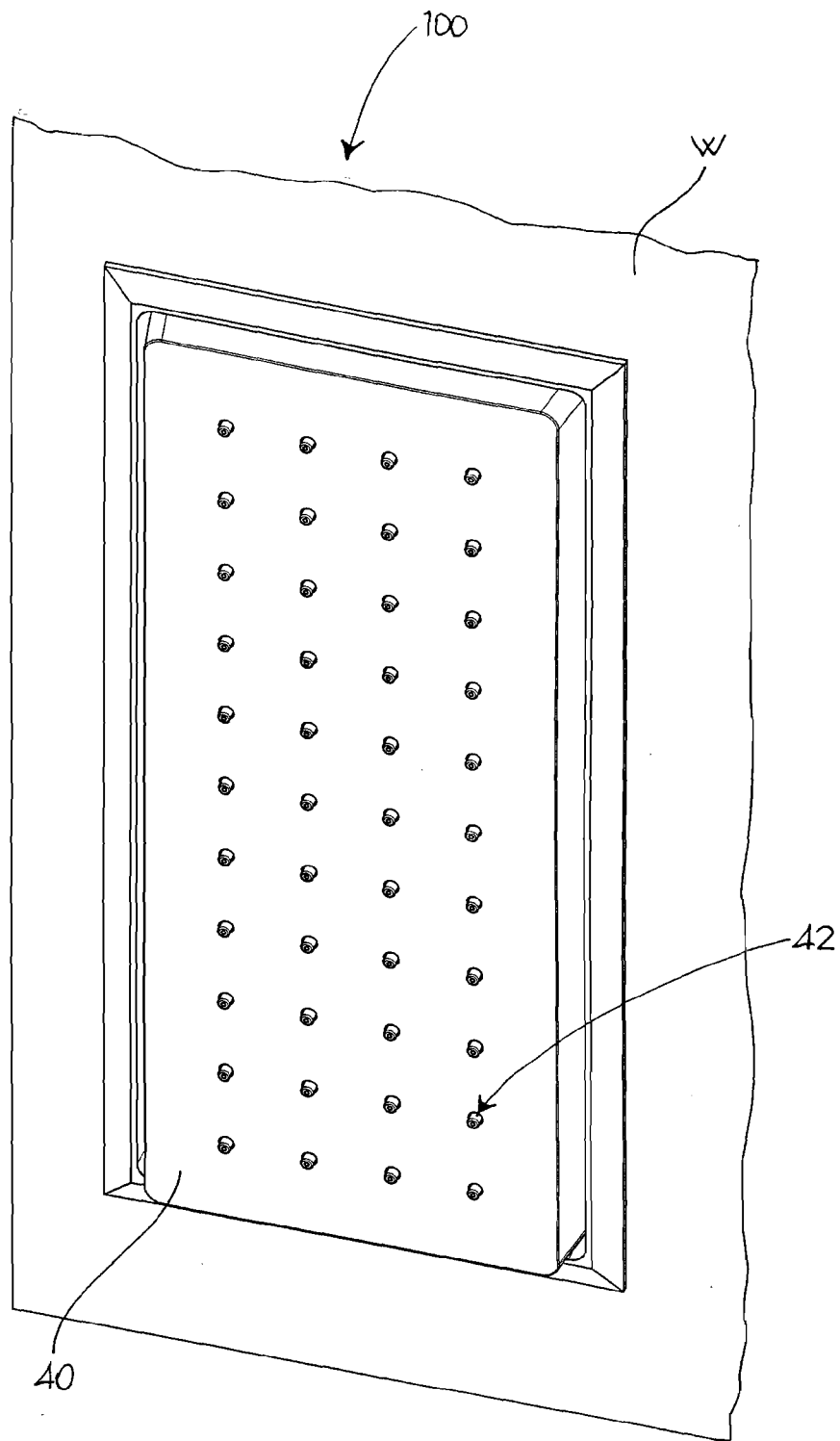


Fig. 9

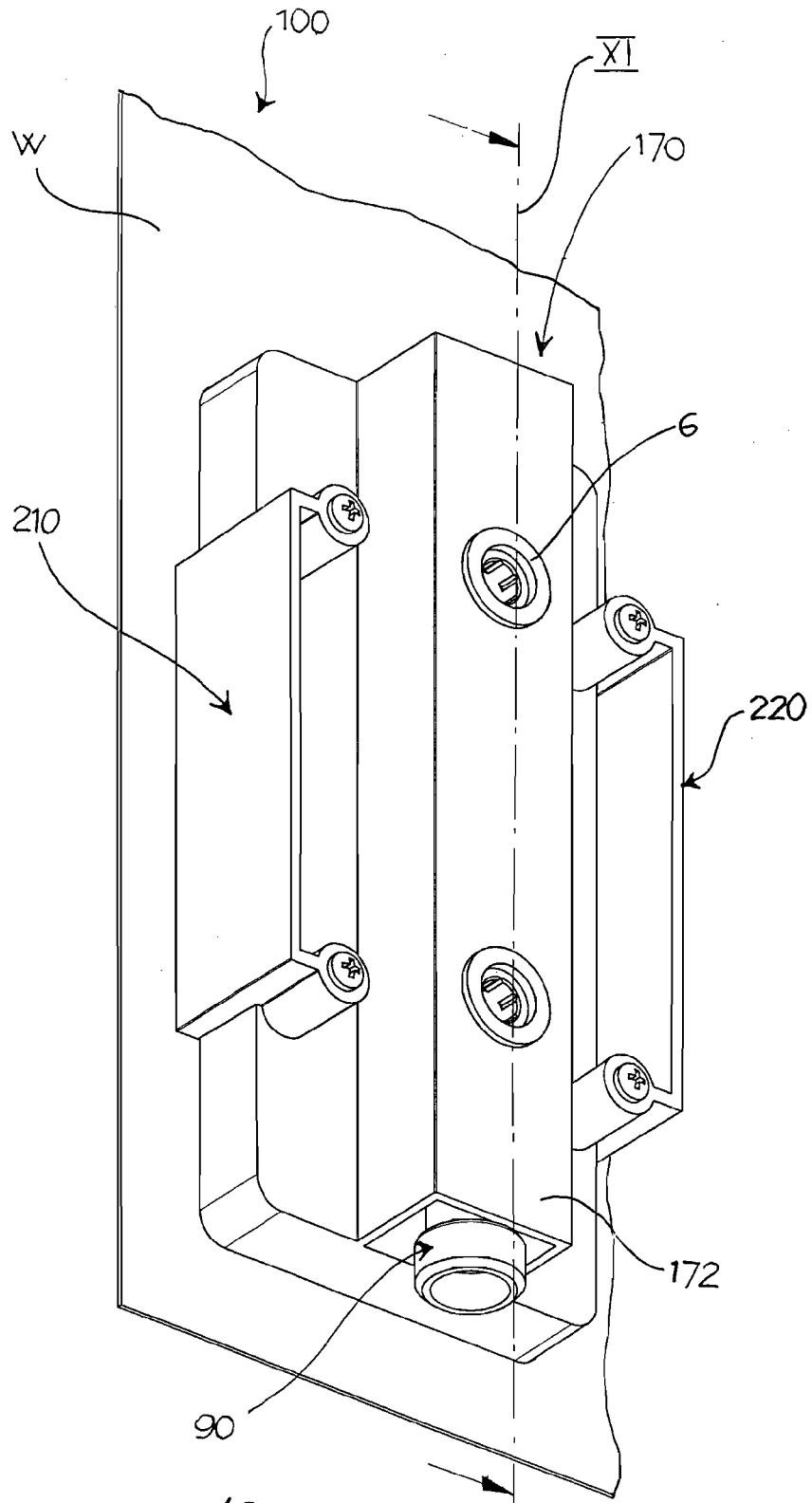


Fig. 10

