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(54) Sanitary fitting drain and overflow-assembly device

(57) A sanitary fitting drain and overflow-assembly device is characterized in that said device comprises a drain associated with a communicating vessel device.

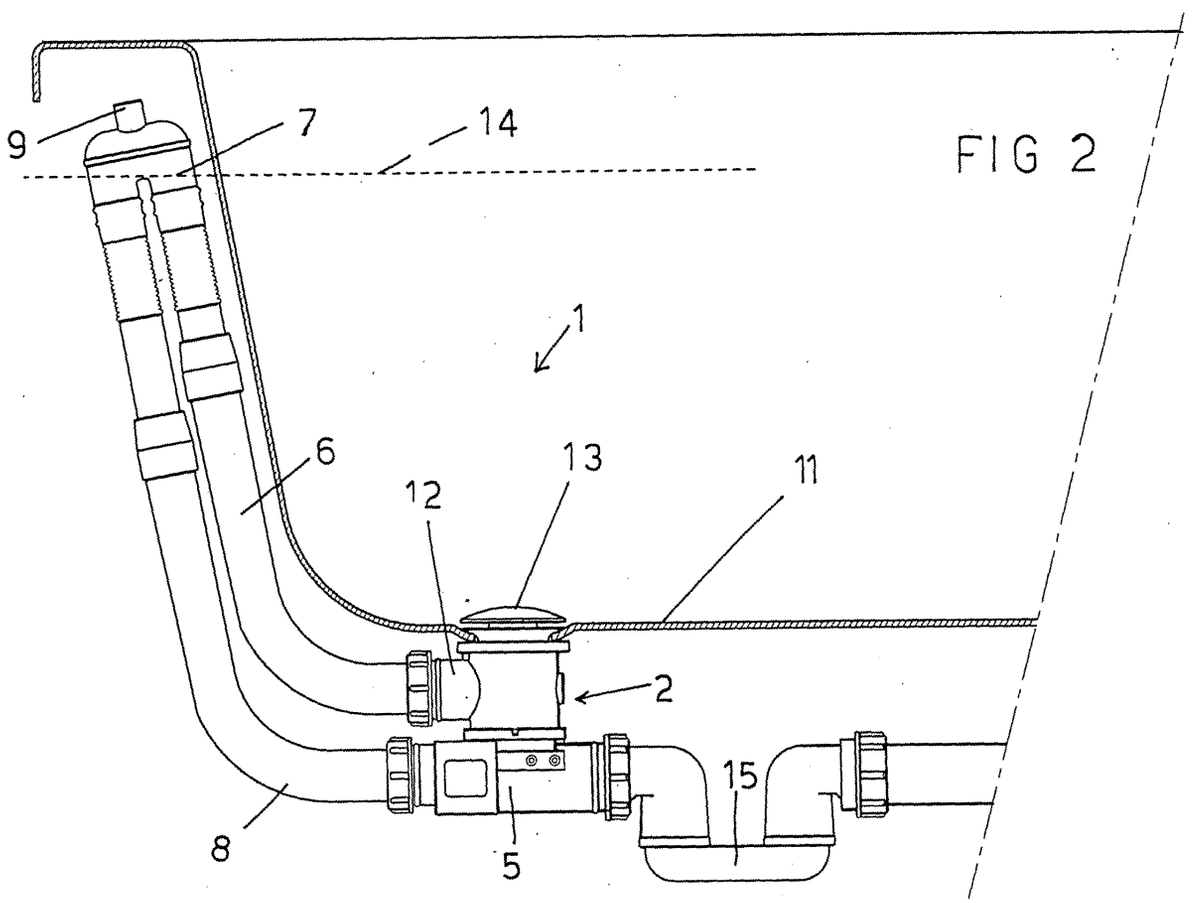


FIG 2

EP 1 593 784 A2

Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a sanitary fitting drain and overflow-assembly devices.

[0002] As is known, a sanitary fitting, such as a wash basin or bath tub, comprises an overflow drain hole for preventing water from overflowing.

[0003] However, sanitary fittings also exist which do not comprise the above mentioned overflowing or draining hole, and this for a lot of reasons.

SUMMARY OF THE INVENTION

[0004] Accordingly, the aim of the present invention is to provide an overflow device for sanitary fittings which do not include the above mentioned overflow draining hole.

[0005] Within the scope of the above mentioned aim, a main object of the present invention is to provide such a sanitary fitting drain and overflow-assembly device which is very reliable and safe in operation.

[0006] Another object of the present invention is to provide such a device, which, together with very good operating characteristics, is also provided with satisfactory aesthetic features.

[0007] According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a sanitary fitting drain and overflow-assembly device, characterized in that said device comprises a drain associated with a communicating vessel device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] Further characteristics and advantages of the present invention will become more apparent hereinafter from the following detailed disclosure of a preferred, though not exclusive, embodiment of the invention, which is illustrated, by way of an indicative but not limitative, example in the accompanying drawings, where:

Figure 1 is an elevation cross-sectioned view of the sanitary fitting drain and overflow- assembly device according to the present invention;

Figure 2 is a further elevation cross-sectioned view illustrating the device according to the invention applied to a bath tub, in an overflowing condition;

Figure 3 is a further broken-away side elevation view illustrating the device according to the invention;

Figure 4 is a front elevation view illustrating a coupling sleeve for coupling a drain;

Figure 5 is a side cross-sectioned view of a drain with its outer and inner plugs so lowered as to prevent the sanitary fitting from draining; and

Figure 6 is a side cross-sectioned view illustrating a drain assembly with the outer and inner plugs in a raised condition, i.e. in an opening condition, thereby allowing the sanitary fitting to be drained.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0009] With reference to the number references of the above mentioned figures, the sanitary fitting drain and overflow-assembly device according to the present invention, which has been generally indicated by the reference number 1, comprises a drain 2, applied to the bottom of a basin or tub 11, and including a top gripper element 12 of a raising or upright tube 6.

[0010] Said drain comprises moreover an outer plug 13, for example of a snap-closure type, which can be closed by applying a pressure thereon, and an inner plug 3, including an inner plug gasket 4, which opens the drain assembly on a bottom element 5, in turn coupled to a drain tube 8.

[0011] The latter is coupled to the upright tube 6, by a coupling sleeve 7, arranged at the overflow level 14 of the tub.

[0012] The bottom element 15, in particular, communicates with a draining siphon 15, coupled to the water system outlet.

[0013] Figure 4 shows an embodiment of the drain assembly, generally indicated by the reference number 22, including a conventional driving lever 34, for driving the drain plug.

[0014] The water draining, in particular, is achieved as the water level arrives at the overflow point 14 in the coupling sleeve 7 of the two outside tubes.

[0015] During the water delivery for filling-in the tub, water passes between the plug 13 and drain 2.

[0016] The inner plug 3, in turn, provides the closure through a suitable gasket, on the bottom element 5 thereby preventing any water drains.

[0017] The water level raises through the tube 6 and simultaneously, due to the communicating vessel law, the level in the tub is raised to the level 14, as water, through said sleeve 7, overflows into the tube 8 and accordingly into the drain.

[0018] Inside said sleeve 7 a check valve 9 allowing air to enter and preventing water from exiting, is provided.

[0019] Said check valve, in particular, will prevent the tub from being fully emptied, as from the overflow-assembly the draining is started.

[0020] As it is intended to empty the tub, the plug 3 is raised by a suitable plug raising mechanism; thereby allowing water to directly flow to the outlet tube.

[0021] It has been found that the invention fully achieves the intended aim and objects.

[0022] In fact, the invention provides a sanitary fitting drain and overflow-assembly device, in which the overflowing operation is performed through a communicat-

ing vessel system, the tubes of which are coupled by a sleeve, and which allows wash basins, bath tubs and the other, free of draining holes; to be easily used.

[0023] In practicing the invention, the used materials, as well as the contingent size and shapes, can be any, depending on requirements.

Claims

1. A sanitary fitting drain and overflow-assembly device, **characterized in that** said device comprises a drain associated with a communicating vessel device.

2. A device according to claim 1, **characterized in that** said device comprises a drain applied to a bottom of a tub and including a top gripper element for an upright tube and a bottom gripper element for an outlet tube.

3. A device according to claim 1 or 2, **characterized in that** said drain comprises an outer plug and an inner plug opening said drain on a bottom element in turn coupled to an outlet tube.

4. A device according to one or more of the preceding claims, **characterized in that** said outlet tube is coupled to said upright or raising tube by a coupling sleeve arranged at the tub overflow level.

5. A device according to one or more of the preceding claims, **characterized in that** said bottom element communicates with an outlet siphon, coupled by the water system outlet.

6. A device according to one or more of the preceding claims, **characterized in that** said drain comprises an operating lever for operating said outer plug and said inner plug:

7. A device according to one or more of the preceding claims, **characterized in that** said drain comprises an automatic plug or other driving or control device, such as a rope.

8. A device according to one or more of the preceding claims, **characterized in that** in said device water is discharged as the water level achieves an overflow point in said sleeve coupling the two outside arranged tubes.

9. A device according to one or more of the preceding claims, **characterized in that** in filling-in said tub, water passes between said plug and drain.

10. A device according to one or more of the preceding claims, **characterized in that** said inner plug performs a closing operation through a suitable gasket on said bottom element thereby preventing any water dischargings.

11. A device according to one or more of the preceding claims, **characterized in that** water is raised through said tube and; simultaneously; due to the communicating vessel law, in said tub the water level is raised up to the overflow level where water, through said sleeve, is caused to overflow into said tube and consequently into the drain:

12. A device according to one or more of the preceding claims, **characterized in that** inside said sleeve a check valve is provided for preventing air from entering and water from exiting.

13. A device according to one or more of the preceding claims, **characterized in that** said check valve operates in order to prevent said tub from being fully emptied, at the start of the outlet of water from the overflow-assembly device.

14. A device according to one or more of the preceding claims, **characterized in that**, in order to empty the tub, the empting plug is raised to allow water to directly flow to the drain tube

15. A device according to one or more of the preceding claims, **characterized in that** said device comprises one or more of the disclosed and/or illustrated characteristics.

FIG 1

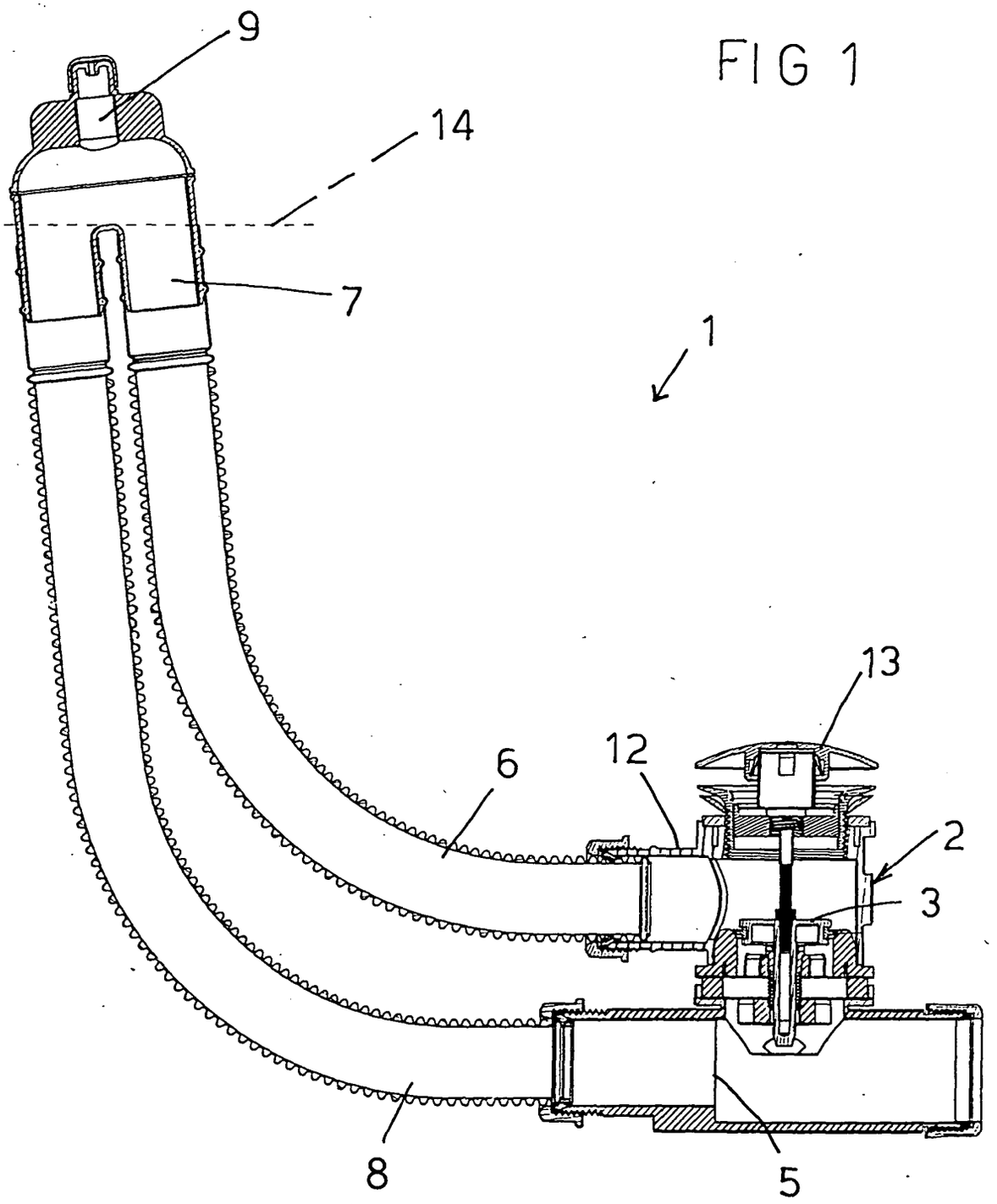


FIG 2

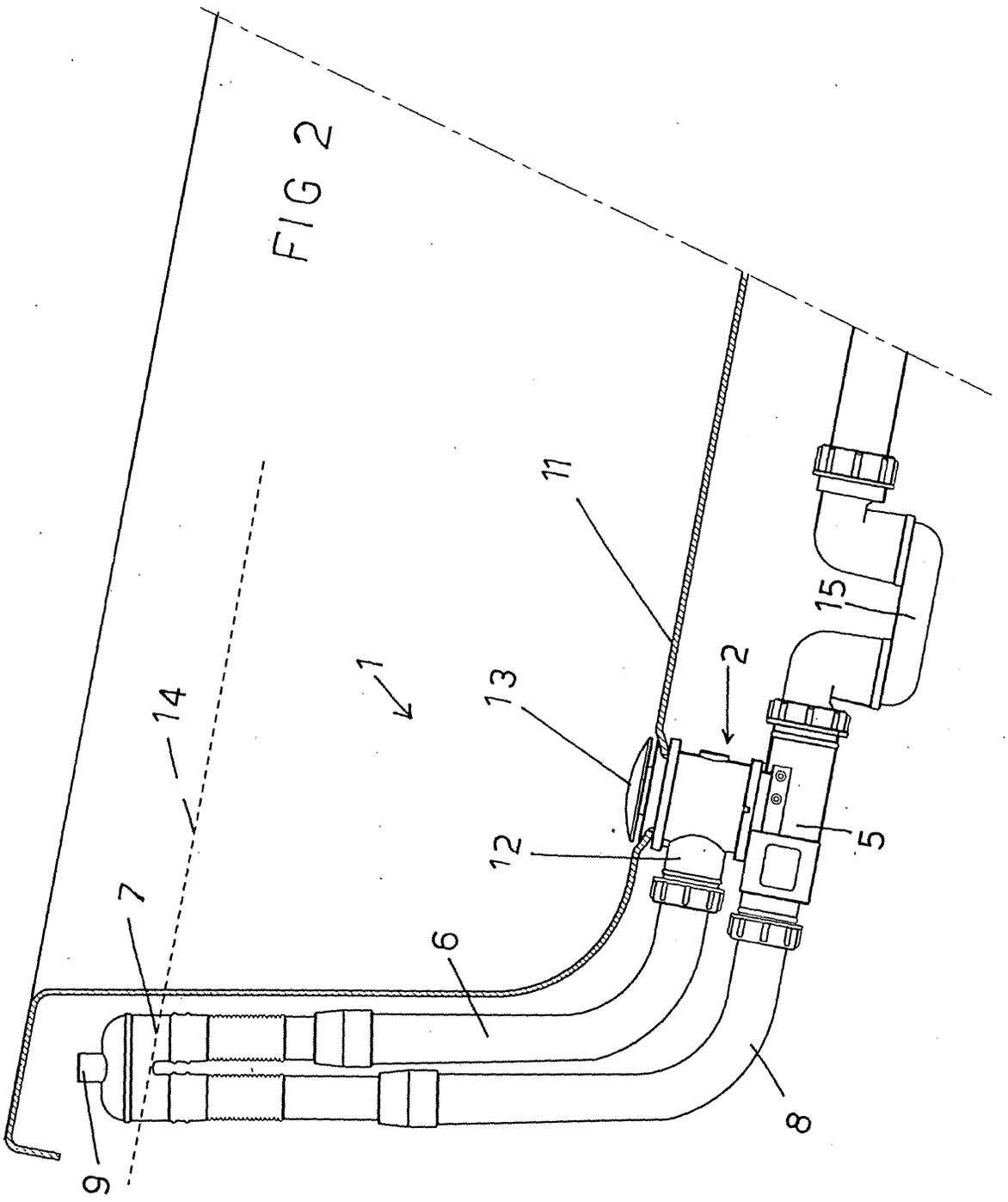
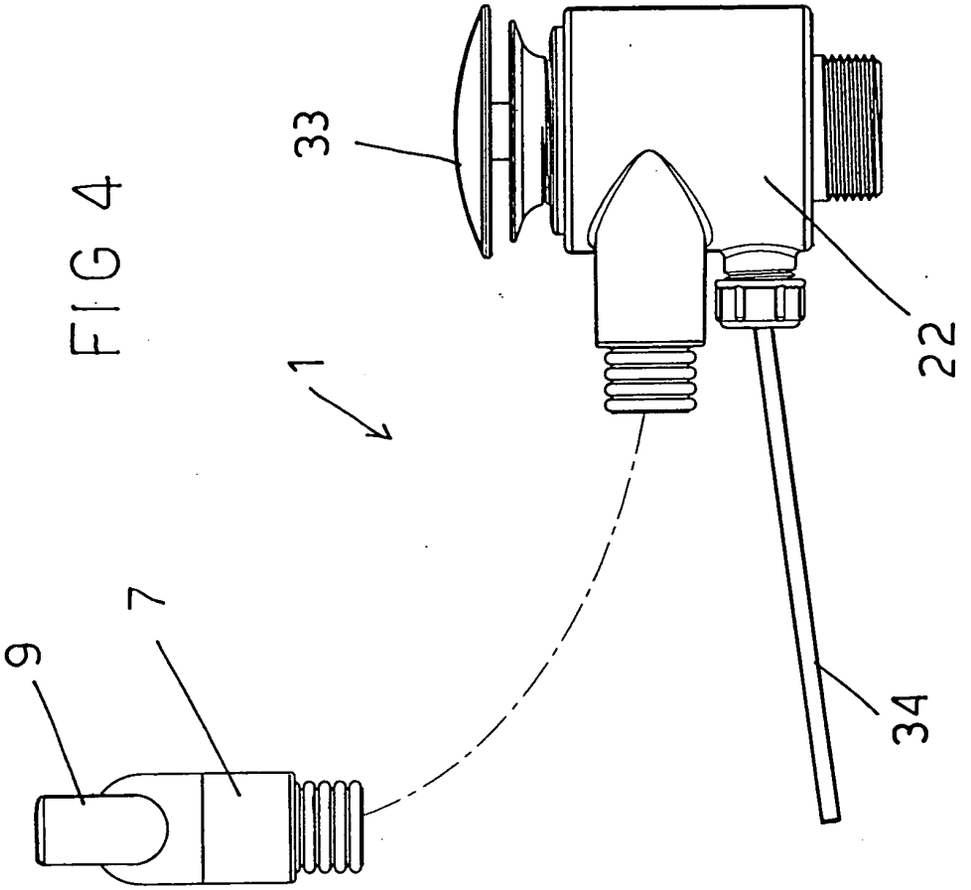


FIG 4



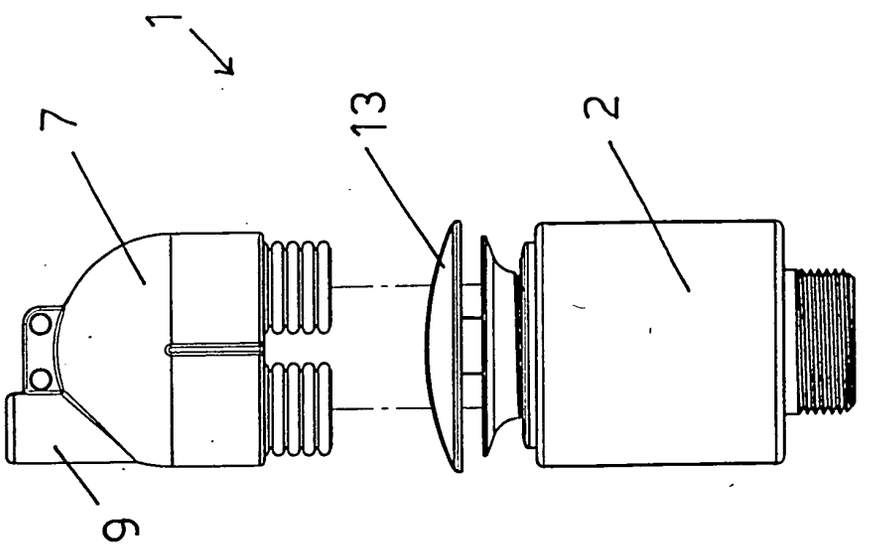


FIG 3

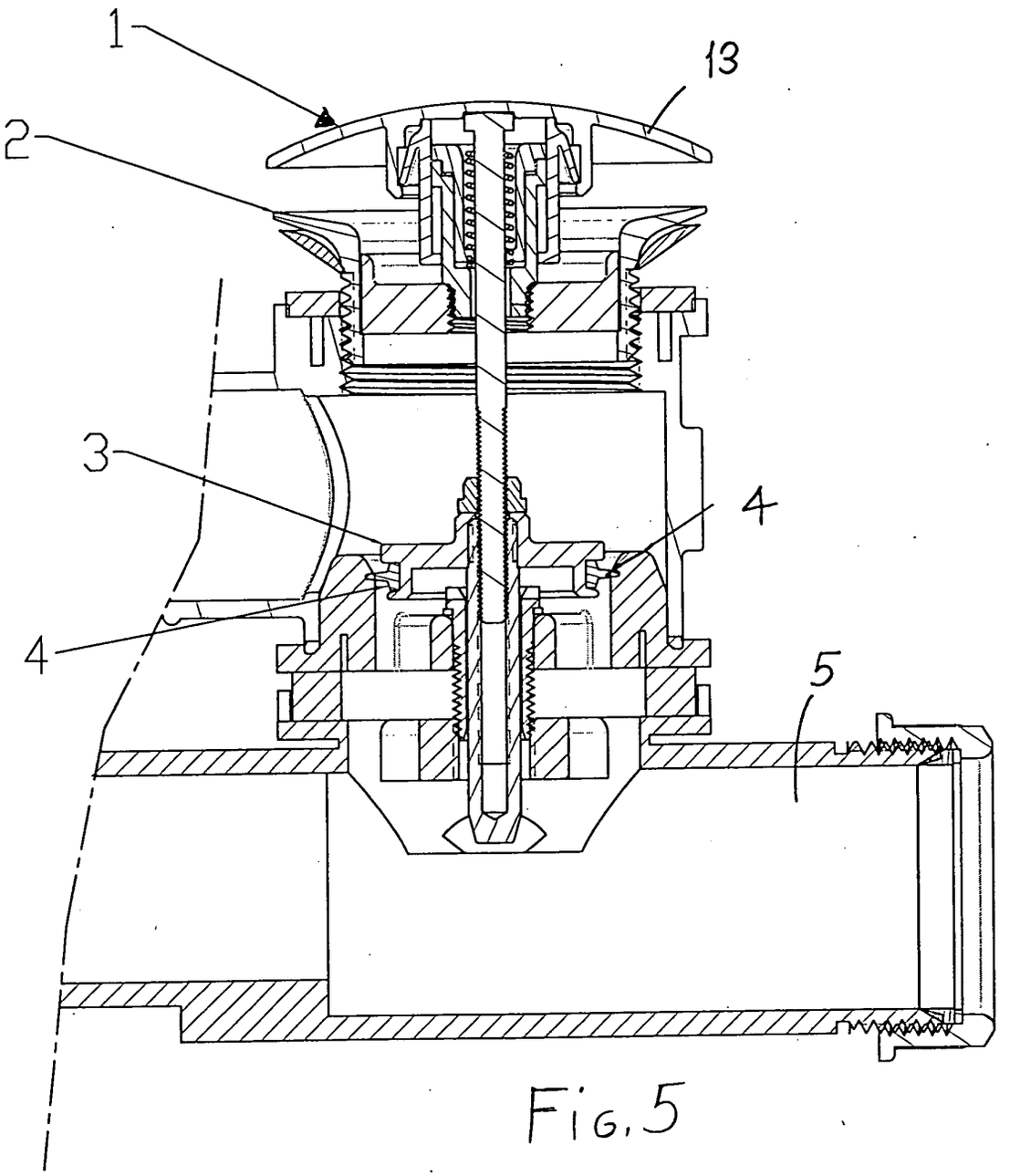


Fig. 5

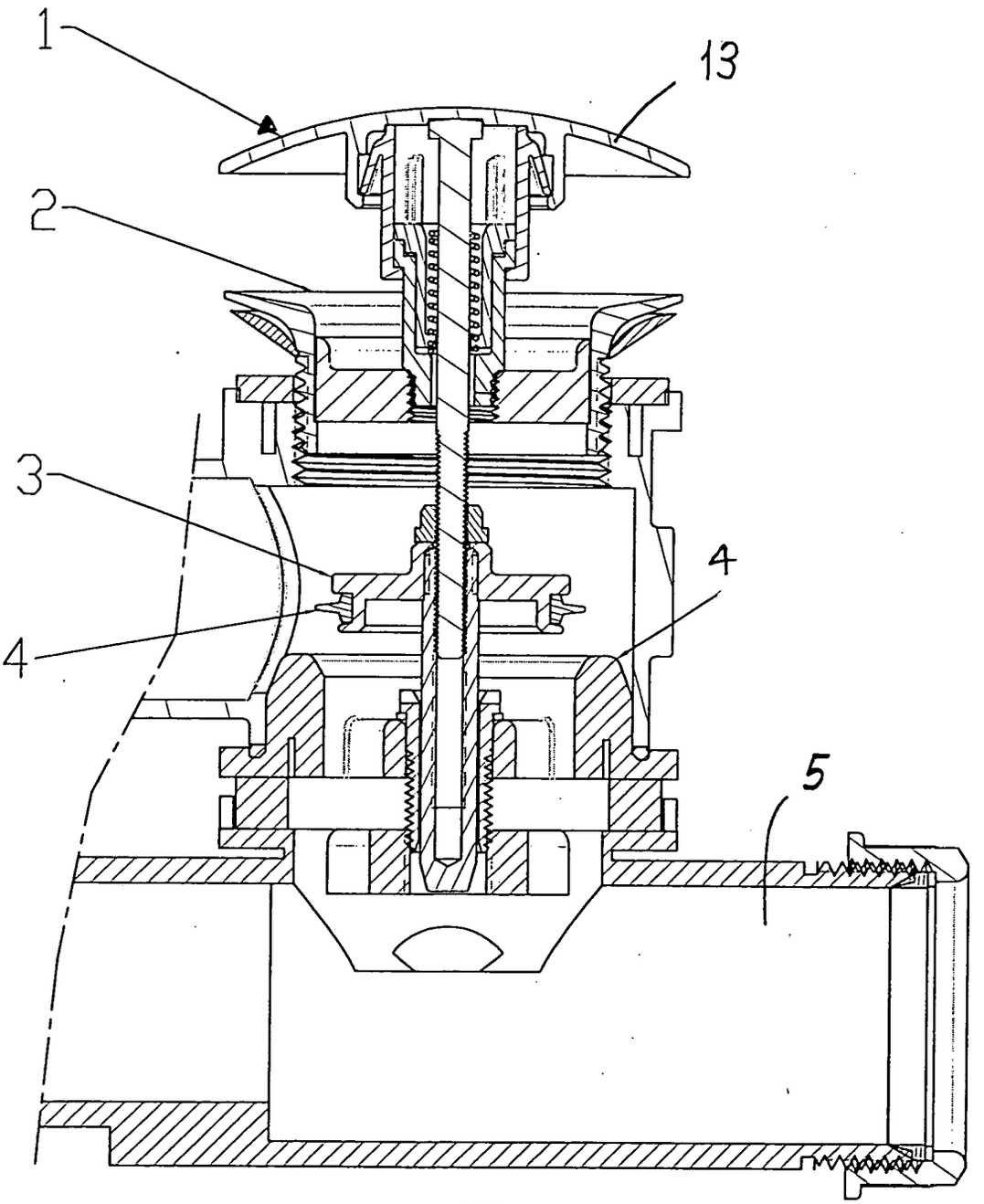


FIG. 6