

Improvements to shower columns or panels

The present invention relates to improvements to shower columns or panels.

5 A shower panel is generally made of three parts:

A upper part comprising the shower sprinkler head, the controlling device for controlling the flowing of water, such as a delayed closing valve, and the arrival of water, a lower part comprising the controlling organ and a post mechanically connecting these two parts and protecting the ducting which makes the connection between them.

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Such a device is disclosed, very notably in French patent 2,492,942.

The above mentioned controlling organ is made of a delayed closing valve, named priming valve, of which the water arrival is connected with the discharging opening of the main valve disposed in the upper part.

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A priming valve comprises a pusher which, when pressed, controls the opening of the main valve.

20 A prolonged action on the above mentioned pusher shall not allow the perturbation of the delaying and successive improvements have allowed the making of a priming valve such as the one disclosed in the French patent application filed by the assignee of the present application on March 26, 2010 under the number 1001205.

25 Due to its conception, this valve can be made in whole moulded in plastic material and the assembling of its constitutive parts is particularly easy.

One goal of the present invention is to implement an assembly of means allowing in particular the efficient implementing of a priming valve as recited hereabove.

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As per the present invention, the lower part of the mounting comprises a casing in two parts, one of which forming a base and comprising means to allow it being fixated against the usual wall and to maintain the priming valve, while the other, which totally covers the first part, forms a metallic protecting shell and comprises means for operating the controlling pusher of said valve and for evacuating the water resulting of the discharging of the priming valve and of the main valve.

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Further features will become more apparent from the following description made in reference with the appended drawings, only on an indicative basis, in which

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Figure 1 is a front view of the lower part of a shower panel, part to which the invention relates;

Figure 2 is a left side view of Figure 1;

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Figure 3 is an exploded perspective view showing all the components of Figure 1;

Figure 4 is a view in cross section along line III-III of Figure 1,

Figure 5 is a view similar to the view of Figure 4, showing the placement of the protective shell;

Figure 6 is a perspective view, from below, of the protective shell.

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In reference with the drawing, it can be seen that the problem mainly resides in protecting a priming valve 1, of a known type, the pressing of the pusher 2 thereof allowing the controlling of the opening of a delayed valve disposed in the upper part of the sheath 3.

10 Of known manner, the valve 1 comprises an entrance opening 4 and an exit opening 5.

The entrance 4 communicates, through a connection piece, not shown, with the discharging opening of the main valve, said connection piece being protected by said sheath 3.

15 The opening 5 allows discharging of the water contained in the delaying chamber of the main valve.

20 The valve 1 is maintained by a base 6, preferably made in a moulded plastic material, fixated against the supporting wall by means of screws, not shown, passing through openings 7 of said base.

25 The base 6 comprises means allowing to nest its upper part 8 in the sheath 3. This base may comprise a tongue 9 enabling, with the aid of a screw whose axis is schematically shown in 9a, to fixate said base to the lower part of the sheath. Similar means may be used on the upper part of the panel, ie the part comprising the main valve, to maintain the upper part of the sheath.

30 The base 6 comprises means for centering and maintaining the valve 1. As per an embodiment, the base 6 comprises arms 10 capable of elastically clamping the body of the valve 1, which **clipses** in the sleeve formed by the arms 10. To this effect, it may be thought to have at least two arms, diametrically opposed, each comprising a flange oriented toward the inside of the sleeve to elastically penetrate in a groove provided on the valve or to bear on a shoulder (these two alternative means not being shown).

35 The base and the valve are covered by a metallic protective shell 11 which partially extends on the lower part of the sheath and comprises at least one hook 12 (Figure 4) extending under the face 3a of the sheath.

40 The base 6 comprises an edge 13 allowing centering of the shell 11, or lid, means being provided for fixating the lid 11 against the base.

45 The lid 11 comprises an opening 11a outside of which extends an articulated metallic paddle 14, comprising a peripheral flange 15 delimitating the exit of said paddle, the internal face of which being in contact with, or extending in the vicinity of, the end of the pusher 2 of the priming valve. This paddle isolate the valve from the users.

50 In an embodiment, the paddle 14 comprises two arms 16 each provided with a bearing journal 17. The internal face of the lid comprises two cradles for receiving the above mentioned bearing journals, the latter being maintained in the former by half bearings 18 fixated by screws the axis thereof being schematically indicated in 19.

By pressing on the paddle, the user presses the pusher 2 and activate the opening process of the main valve.

- 5 The paddle 14 may be maintained in the position shown in Figure 2 by the return spring of the pusher 2, but preferably the paddle may be submitted to the action of spring strips 20 the free ends thereof bearing under the flange 15. These strips are made, preferably, during the moulding of the base 6.
- 10 The lid 11 comprises a screw 21, the axis thereof is substantially vertical in the use position and extends parallel to the surface on which the base is fixated. This screw is axially immobilized in respect to the lid and the head 21 thereof being flush with the lower part of the lid, the latter advantageously hiding the former (see in particular figure 4).
- 15 The screw 21 comprises a shoulder 21b restricting the penetration thereof in a bearing 22 of the lid, the axial immobilization of the screw being obtained by a securing ring or circlip 23 engaged in a groove 21c, provided on the side opposite the shoulder relative to said bearing.
- 20 The base 6 comprises a threading provided in a cage 24 for receiving the screw 21. In an embodiment, the cage 24 is wisely moulded to immobilize, in respect to the base, a usual commercial nut 25.
- 25 As shown in figure 2, the nut 25 is introduced in the cage 24 through an opening 26 provided in the base 6.
- To fixate the lid, it is disposed as shown in figure 5, and then it is pushed along arrow F direction to engage the screw in the nut 25.
- 30 The screw 21 is passed through by a canal 21d which, in totality or partially, comprises a polygonal shaped section (for example hexagonal) to allow its driving in rotation.
- When the lid is fixated on its base, the upper end of the screw 21 emerges just below the exit opening 5 of the valve, as this can clearly be seen on figure 4. In this way, the discharge water is directed to the outside by the central hole of the screw 21.
- 35 Preferably, the screw 21 is made in a plastic material and fullfills a double function (fixation and evacuation of the water coming form the delaying chambers).

CLAIMS

1. Improvements to shower panels and, more particularly to the lower part of such a panel, connected to the upper part by a metallic protective sheath (3), characterized in that said lower part comprises a casing in two parts, one of which forming a base (6) and comprising means to allow it being fixated against the usual wall and to maintain a priming valve (1), while the other (11), which totally covers the first part and the lower part of the sheath, forms a metallic protecting shell or lid, and comprises means for operating the usual pusher (2) of the priming valve and for evacuating water resulting of the discharging of the priming valve and of the main valve disposed at the upper part of the panel.
2. The improvements as defined in claim 1, characterized in that the lid comprise a pivoting paddle (14), the pressing thereof being capable to provoke the pressing of the pusher of the priming valve(1).
3. The improvements of claim 2, characterized in that the paddle (14) is pushed back by spring strips (20) adding their actions to the action of the usual return spring of the pusher (2).
4. The improvements as defined in one of claims 1 to 3, characterized in that the base comprises arms (10), elastically deformable, forming a sleeve in which the body of the valve (1) may be clipped.
5. The improvements as defined in one of claims 1 to 4, characterized in that the fixation of the lid on the base is made by a screw (21), carried by the lid and axially immobilized in respect to the lid, the axis of said screw being vertical and extending parallel to the supporting surface of the base when the panel is in the use position, the screw being able to be screwed in a thread of the base, advantageously made of a usual commercial nut (25) immobilized in a cage of said base.
6. The improvements as defined in claim 5, characterized in that said screw (21) is passed through by a channel (21d), the upper end thereof, in the use position of the panel, emerging just below the exit opening (5) of the priming valve so as to direct discharge water towards the outside.
7. The improvements as defined in claim 6; characterized in that the lower end of the screw is substantially flush with the lower part of the lid.