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(54) **SHOWER FOOTBOARD**

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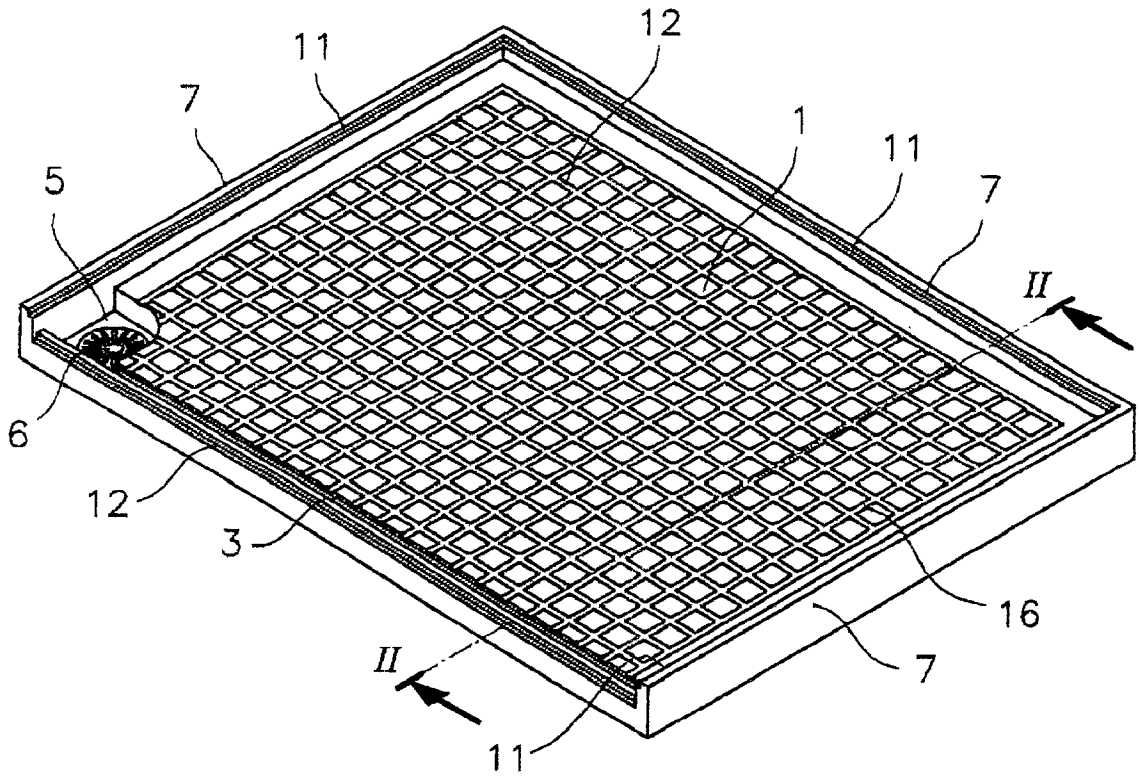
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(57) **ABSTRACT**

The shower footboard is a single piece comprising a plate (**1**) the top surface of which has a part of its perimeter flush with the floor, facilitating an access and another part of its perimeter, not designed to be an access, which can be attached to an inwall (**8**) The top surface possesses, close to that part of the perimeter of the plate (**1**) designed as access at least one narrow oblong opening (**3**) communicating with a large collector located under the plate (**1**) top surface and which is ending in a recess (**5**) where a sewer (**6**) is open. A raised wall (**7**) is spreading along that part of the plate (**1**) perimeter not designed as an access constituting a barrier in order the liquid does not reach a seal arranged in a stepped undercutting (**11**).



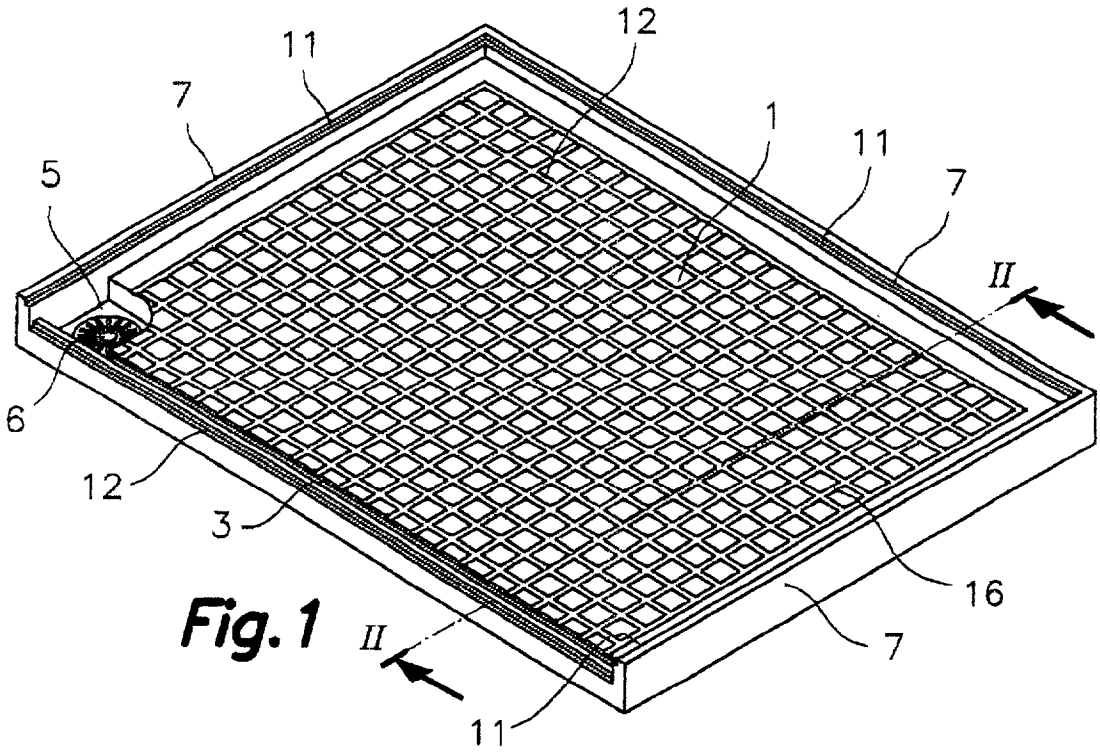


Fig. 1

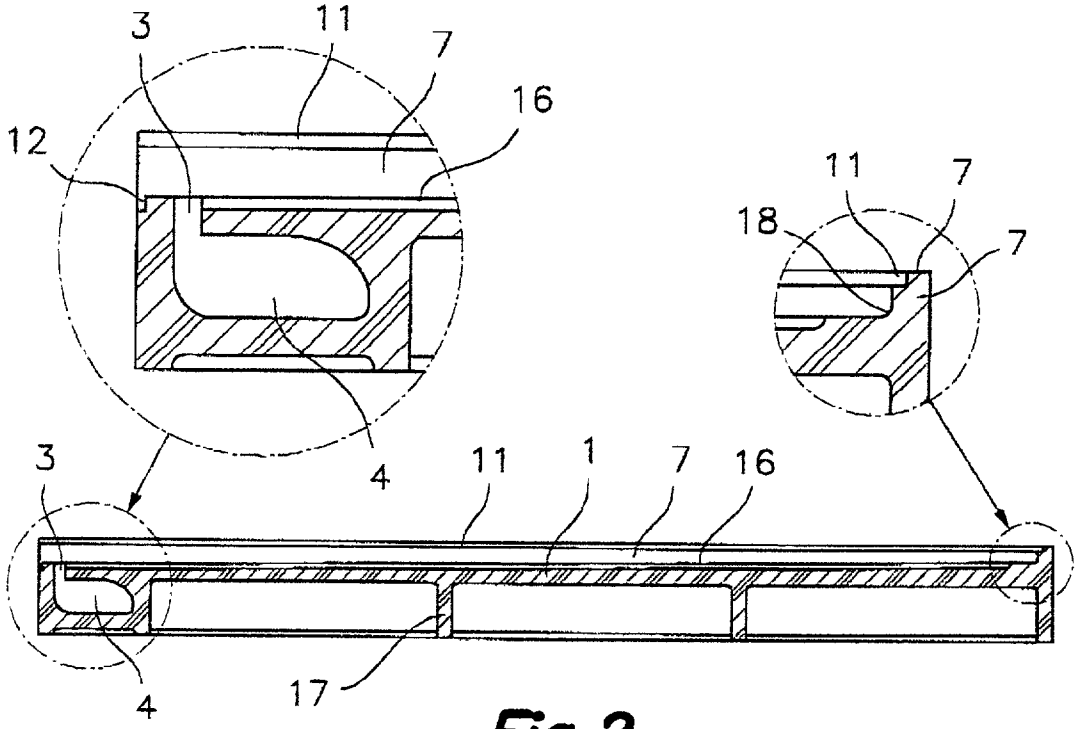


Fig. 2

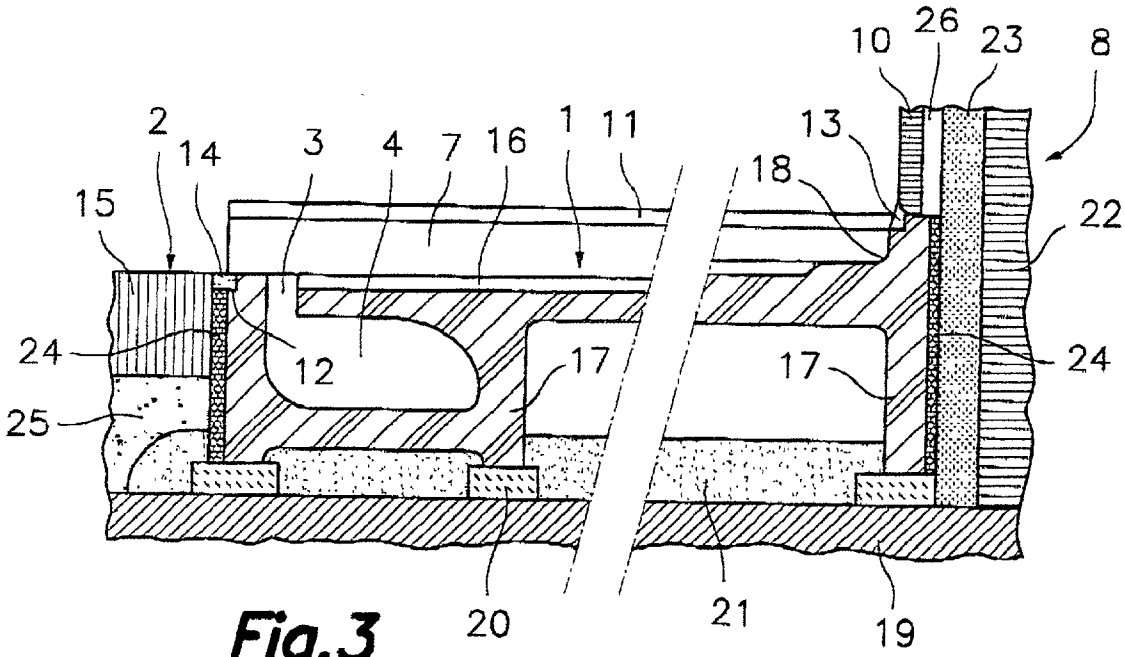

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Fig.3

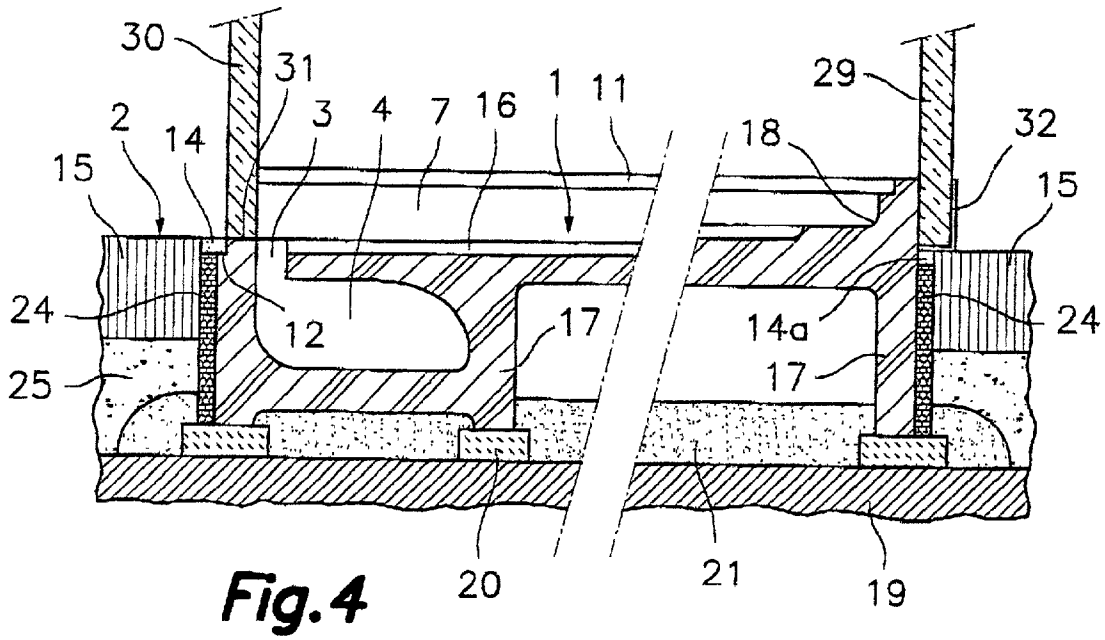

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Fig.4

SHOWER FOOTBOARD

FIELD OF THE INVENTION

[0001] This invention refers to a shower footboard constituted in a single piece comprising a plate having a top surface provided with part of its perimeter flush with the floor designed as an access and another part of its perimeter which can be attached to an inwall. The top surface possesses close to that part of the perimeter designed as an access, at least one narrow oblong opening which communicates with a large collector located under said plate top surface said collector ending in a recess in which a sewer is open.

BACKGROUND OF THE INVENTION

[0002] EP-A-0 774 226 of this applicant discloses a shower footboard of this kind in which a stepped undercutting is arranged along the whole of the perimetric edge of said plate top surface. The function of said stepped undercutting is to house a sealing means which in those areas of the footboard not attached to an inwall, seals off the interstice between tiles or other floor pavement and said plate top surface. This seal remains out of reach of the liquid which is spreading on said plate top surface thanks to the fact that said narrow oblong opening communicating with said collector located under said plate top surface remains interposed.

[0003] On the other hand, another seal is arranged on the stepped undercutting of the areas of the footboard attached to an inwall said seal sealing off the interstice between the footboard and said inwall which typically is filled with a spongy material such as an expanded polymer. The inwall generally comprises an external covering, such as tiles or other covering elements which remain supported on their sides on the external area of the plate top surface so that the seal is arranged between the tiles and the plate. However, this other seal is at same level as the plate top surface and therefore to the mercy of the liquid which is spreading on it.

[0004] Although above arrangement of the first and second seals located on those areas of the footboard respectively flush with the pavement and attached to an inwall secures a footboard good waterproofing it would be preferable that the second seal is out of reach of the shower liquid.

[0005] The object of this invention is to offer a shower footboard as above disclosed provided as well on the parts of its perimeter flush with the floor as on those attached to an inwall with seals protected from continuously contacting the water which is spreading on the plate.

DISCLOSURE OF THE INVENTION

[0006] This object is reached according to this invention by providing said plate with a pedestal or a raised wall extending along those areas of the perimetric edge of the plate attached to said inwall or which are not designed as an access to the footboard This raised wall is reaching at least a 2 to 4 cm height above said plate top surface level, constituting a barrier for the liquid which is spreading on it. The raised wall is ending at its top in an horizontal flat edge and the top limit of the internal surface of said raised wall is ending at its top by a stepped undercutting Said top edge of the raised wall is designed to receive and support the corresponding edge of the tiles or covering elements of said inwall and in said stepped undercutting there is arranged and joined a single means for sealing off the interstice between said tiles or covering elements and said flat edge of the raised wall. Obviously, said seal is out of reach of the liquid which is spreading on the plate top surface as it is at a higher level.

[0007] For facilitating water draining from the plate top surface, as well during the use as after it the shower footboard of this invention contributes with two variations. According to the first of them the plate top surface is fully horizontal and is provided with a plurality of transversal grooves communicated with said narrow oblong opening for entering the draining collector the bottom of said grooves having a slight slope downwards said opening. According to the second variation the plate has a top surface having a slight slope downwards the narrow oblong opening for entering the draining collector, that is to say, downwards a part of access of the plate perimeter. This slight slope is preferable ranging from 0.5 to 3%, the most preferred value being about 1.5%. In this case, the grooves crossing the plate top surface are also present and their bottoms have at least same slope as the plate or more. The slope of the plate implies which height of the raised wall top edge with respect to the plate top surface is gradually increasing as it is closer to the narrow oblong opening connected to the drain collector. As well in one case as in the other, these grooves also act as a non-slip element on the plate surface preventing the possibility that the user slips on it. In order to increase even more the non-slip action other grooves have been provided crossing the first grooves and forming a mesh. The bottom of these second grooves can be horizontal or show a slight slope downwards one or both first contiguous grooves.

[0008] With this arrangement, a shower footboard according to this invention, once installed, has available a user supporting plate provided with a top surface which is flat or slightly tilted downwards the oblong opening connected to the drain collector which secures an effective evacuation of the shower water said plate being fully surrounded by one or the other seal which is out of the reach of the liquid which is spreading on the plate top surface either because a narrow oblong notch is interposed at the areas not attached to the inwall or access areas or because it is at a higher level at the top limit of said raised wall, in those other areas attached to an inwall or a limiting screen.

SHORT EXPLANATION OF THE DRAWINGS

[0009] These and other characteristics and advantages will be better apparent from following detailed description with reference to the drawings appended in which:

[0010] **FIG. 1** is a view in perspective of a shower footboard according to this invention;

[0011] **FIG. 2** is a cross sectional view taken along the line II-II of **FIG. 1** with enlarged details;

[0012] **FIG. 3** is a cross sectional view of the shower footboard of **FIG. 1** once installed, showing mounting arrangements; and

[0013] **FIG. 4** is a cross sectional view of a variation of the shower footboard of **FIG. 1** to **3** once installed, showing details of other mounting variations.

DETAILED DESCRIPTION OF EXAMPLES OF EMBODIMENT OF THE INVENTION

[0014] Referring first to **FIGS. 1 and 2**, the shower footboard of this invention is constituted by a single piece comprising a top surface provided with at least one part of its perimeter flush with floor **2** (see also **FIGS. 3 and 4**) facilitating an access and another part of its perimeter, not designed as an access which can be attached to an inwall **8** or be delimited by a screen **29** (**FIG. 4**). Said plate top surface possesses close to those parts of its perimeter designed to be an access, that is to say which are going to remain free and at floor level, a narrow oblong opening **3** communicating with a large collector **4** (better shown in the detail on the left of **FIG. 2**) located under said plate (**1**) top surface, said collector **1** ending in a recess **5** in which a sewer **6** is open.

[0015] In the example shown in **FIG. 1** the shower footboard has a generally rectangular shape with four rectilinear sides three of which are designed to be attached to an inwail **8** or closed by a screen **29** while the remaining side along the edge of which said narrow oblong opening **3** is extending is designed to remain at least partly free and at floor level constituting a free access to the footboard plate **1**. It must be pointed out that many other configurations are possible. For example, it could have two sides designed to be attached to the inwall **8** or only one and the other two or three designed to remain free and at floor level in which case said narrow oblong opening **3** would extend along those two or three last sides. It is obvious that the footboard could have other shapes apart from the rectangular, such as for example polygonal, circular, semicircular or quarter-circular, among others. It is also obvious that the narrow oblong opening **3** could be discontinuous provided that it communicates with a single collector **4**.

[0016] Along those areas of the plate **1** perimetric edge designed to be attached to said inwall **8** or closed by a screen **29** (**FIG. 4**) a preferably vertical raised wall **7** extends, which raises above the level of said plate **1** top surface constituting a barrier for the liquid. The raised wall **7** is ended on the top by a horizontal flat edge **9** and at the top limit of said wall **7** internal surface adjoining said flat edge **9** a stepped undercutting **11** is arranged the functions of which will be explained below with reference to **FIGS. 3 and 4**.

[0017] According to the variation of embodiment illustrated, said plate **1** top surface shows a slight slope downwards that part of its perimeter where said narrow and oblong opening **3** is located through which the access occurs and therefore the height of the horizontal flat edge **9** of said raised wall **7** with respect to the plate **1** top surface level gradually decreases as said wall **7** is going away from the narrow oblong opening **3** (as it can clearly be seen in **FIGS. 3, 4**), said height being at least 2 to 4 cm. A usually suitable height is ranging from 5 to 10 cm. On its hand, said plate **1** top surface slight slope is ranging from 0.5 to 3%, preferably about 1.5%. This slight slope secures a good evacuation of the water downwards the narrow oblong opening **3** communicated with the drain collector **4** without constituting any hindrance for, for example, people having a reduced mobility or even in wheelchairs as well during its access as for moving or staying on the footboard. Said plate **1** top surface comprises grooves **16** the bottom of which has same slope as the plate **1** top surface or more and is suitable for cooperating in the evacuation of the liquid downwards said narrow oblong opening **3** and therefore downwards the collector **4**, recess **5** and sewer **6**.

[0018] According to a second variation not shown, the plate top surface is horizontal and crossed by a plurality of transversal grooves which ends in the narrow oblong opening. In this case the bottom of said grooves is slightly tilted downwards said opening.

[0019] Said grooves **16** in addition cooperate for providing a plate **1** top anti-slip surface. According to an example of embodiment of the shower footboard of this invention, as it is shown in **FIG. 1**, said footboard comprises other grooves **28**, crossed by the grooves **16** forming a mesh the bottom of said second grooves **28** being horizontal or slightly tilted downwards one or both contiguous first grooves **16** so that they increase said anti-slip quality of the plate **1** top surface while they drain downwards the grooves **16** or main grooves.

[0020] Advantageously, the dihedral formed by the internal surface of said raised wall **7** with said plate **1** top surface has a rounded internal edge **18** while on the external edge of said part of the plate **1** perimeter where the narrow oblong opening **3** is located arranged at floor level there exists a second stepped undercutting **12** the functions of which are also explained below with reference to FIG, **3** and **4**.

[0021] Last, the plate **1** is provided on its lower surface with partitions walls **17** or lugs acting as supporting elements for the plate **1** on the base floor where it is to be installed, on said floor also a pavement is installed so that the plate **1** top surface and said pavement are flush with each other. For this, the plate **1** thickness is approximately same as the most usual thickness of the kind of pavements most used, that is to say about 55 mm.

[0022] The single piece constituting the shower footboard according to this invention is typically made molding a polymeric material with additives, including a foaming agent and fillers. However, it could also be made of other materials such as enamelled ceramics or the like.

[0023] **FIGS. 3 and 4** respectively show two examples of embodiment of the raised wall **7** of the shower footboard according to this invention according to two different variations of installation which can be seen in their respective cross sectional views corresponding to the two shower footboards once installed.

[0024] The part on the left of **FIG. 3** corresponds to an area of the shower footboard which remains at floor **2** or pavement level while the part on the right corresponds to a shower footboard area which remains attached to an inwall **8**. The details of the mounting correspond to an orientating example of recommended installation.

[0025] It will be seen that the whole of the footboard rests on the base floor **19** through the partition walls **17** or supporting lugs, preferably on an abutment **20**, laid on a mortar bed **21**. The plate **1** remains attached to the inwall **8** (right part of. **FIG. 3**) which in the example illustrated comprises a brick wall **22** covered with a plaster **23**. Preferably, on the full contour of the shower footboard a layer **24** of insulating material such as expanded polymer is included.

[0026] Now newly with reference to the left part of **FIG. 3**, tiles **15** or any other floor pavement are laid on a layer of mortar **25** after locating the plate **1** at its place so that the edge of the plate **1** top surface corresponding to this side remains flush with the top surface of tiles **15** or the pavement chosen. It must be pointed out that a seal **14** arranged between the floor tiles **15** and the plate **1** remains out of reach of the liquid which is spreading on said plate **1** top surface due to the fact that the narrow oblong opening **3** remains interposed.

[0027] On the right part of **FIG. 3**, the footboard includes said raised wall **7** which is spreading along the perimetric edge of the plate **1** attached to said inwall **8**, said wall **7** raising above said plate **1** top surface level constituting a barrier for the liquid.

[0028] As stated above, the dihedral formed by the internal face of said raised wall **7** and said plate **1** top surface has a rounded internal edge **18**. Said wall **7**, acting as a barrier, is ended at the top in an horizontal flat edge **9** and along the whole of the wall **7** internal surface top limit where it borders the flat edge **9** a stepped undercutting **11** is arranged. Said flat edge **9** supports related edge of the tiles **10** or other elements for covering said inwall **8**, and a sealing means **13** is arranged embedded and joined to that stepped undercutting **11** for the slot or interstice between said tile **10** or covering element and said flat edge **9**, said seal **13** remaining out of reach of the liquid which is spreading on said plate **1** top surface as it is located at a higher level.

[0029] Advantageously, both seals **13**, **14** are made of a material having fungicide properties.

[0030] With this arrangement, as well the seal **14** arranged on the plate **1** area designed as an access, that is to say, free and at floor level (left part of **FIG. 3**) as the seal **13** of plate **1** area attached to the inwall **8** (right part of **FIG. 3**) are out of reach of the liquid which is spreading on the plate **1** top surface.

[0031] In the example of embodiment of **FIG. 4**, the footboard is designed to be installed within an enclosure of screens **29**, **30**.

[0032] On the left part of **FIG. 4**, the installation of the footboard on the floor **2** is identical to that disclosed with reference to the left part of **FIG. 3**. However, here the raised wall **7** of the sides of the footboard adjoining the part of the plate **1** perimeter where the narrow oblong opening **3** is located is interrupted just at the point of said opening **3** in order to allow that a screen **30**, for example a glass screen, is installed on the narrow strip **31** separating the opening **3** from the seal **14**. This screen **30** can close for example part of the side of the plate **1** where the narrow oblong opening **3** is located leaving a gap sufficient for having access to the footboard, said access can additionally be closed by means for example of a glass door, a sliding screen or a curtain.

[0033] On the right part of **FIG. 4** despite it shows the raised wall **7**, the footboard is not attached to any inwall but it is closed on this side by a screen **29**, for example a glass screen with its lower edge leaned against the external surface of the raised wall **7**. This lower edge of the screen **29** rests on the lower branch of a L-shaped profile **32** externally leaned against a strip of the screen **29** located close to the lower edge leaned against the external surface of the raided wall **7**, covering this strip. In the example shown, said L-shaped profile **32** also covers a seal **14***a* arranged between the tiles **15** of the floor **2** and the plate **1**. However, the main aim of the profile **32** is to visually conceal the joining strip between the screen **29** and the external flank of the raised wall **7** in the event that the screen **29** is transparent. For this, the profile **32** could have other shapes, such as U or I-shaped.

[0034] It is obvious that this mounting of the right part of **FIG. 4** would also be applicable to the case of the example of embodiment of **FIG. 3** and that the mounting of the right part of **FIG. 3** would also be applicable to the example of embodiment of **FIG. 4**.

[0035] The Combination of the raised wall **7** with the slightly tilt surface or grooves of the plate **1** secures a correct evacuation of the shower water as it falls on the plate while it prevents that the water goes out of the footboard and affects the seals **13**, **14**, **14***a*.

1. Shower footboard, of the kind constituted by a single piece comprising a plate (**1**) having a top surface provided with at least one part of its perimeter flush with the floor (**2**) facilitating an access and another part of its perimeter, not designed as an access, which can be attached to an inwall (**8**) said top surface having close to that part of the plate (**1**) perimeter designed as an access, at least one narrow oblong opening (**3**) communicating with a large collector (**4**) located under said plate (**1**) top surface, said collector (**4**) ending in a recess (**5**) in which a drain outlet (**6**) is open characterized in that it includes a raised wall (**7**) extending along the edge of that part of the plate (**1**) perimeter not designed as an access, said wall (**7**) raising above the level of said plate (**1**) top surface to constitute a barrier for the liquid.

2. Shower footboard, according to claim 1, characterized in that said plate (**1**) top surface shows a slight slope downwards to that part of the perimeter designed to be an access where said narrow and oblong opening (**3**) is located.

3. Shower footboard according to claim 2, characterized in that said slight slope of the plate (**1**) top surface is ranging from 0.5 to 3%.

4. Shower footboard according to claim 3, characterized in that said slight slope of the plate (**1**) top surface is about 1.5%.

5. Shower footboard according to claim 1, characterized in that said raised wall (**7**) is ending in a flat horizontal edge (**9**) adapted to receive thereon the corresponding edge of a tile (**10**) or covering element of said inwall (**8**).

6. Shower footboard according to claim 5 characterized in that at the junction of the top edge of the internal surface of said wall (**7**) with said flat edge (**9**) a stepped undercutting (**11**) is formed in which a sealing means (**13**) is embedded and joined for sealing the interstice between said tile (**10**) or covering element and said flat edge (**9**) said seal (**13**) remaining out of the reach of the liquid which is spreading on said plate (**1**) top surface as it is at a higher level than the plate (**1**).

7. Shower footboard according to claim 1, characterized in that at the external edge of said part of the plate (**1**) perimeter where is located the narrow oblong opening (**3**) arranged at floor level there exists a second stepped undercutting (**12**) in which a sealing means (**14**) is arranged, embedded and joined to it for sealing the interstice between a floor pavement (**2**) such as a floor tile (**15**) and said plate (**1**) top surface said seal (**14**) remaining out of the reach of

the liquid which is spreading on said plate (**1**) top surface as said narrow oblong opening (**3**) is interposed.

8. Shower footboard according to claim 6 or **7** characterized in that said seal (**13**, **14**) is made of a material having fungicide properties.

9. Shower footboard according to claim 1 characterized in that the plate (**1**) top surface is horizontal and comprises grooves (**16**) which cross said plate (**1**) top surface towards the narrow oblong opening (**3**) until ending in it the bottoms of said grooves (**16**) having a slight slope downwards said at least one narrow oblong opening (**3**) suitable for cooperating in the evacuation of the liquid spread on the plate (**1**).

10. Shower footboard according to claim 2 characterized in that it comprises grooves (**16**) crossing the plate (**1**) top surface downwards the narrow oblong opening (**3**) until ending in it the bottoms of said grooves (**16**) having at least same slope as plate (**1**) or greater, suitable for cooperating in the evacuation of the liquid spread on the plate (**1**) downwards said at feast narrow oblong opening (**3**).

11. Footboard shower according to claim 9 or **10** characterized in that it comprises other grooves (**28**) crossing the grooves (**16**) forming a mesh the bottom of said second grooves (**28**) being horizontal or slightly tilted towards one or both the first contiguous grooves (**16**).

12. Shower footboard according to claim 1 characterized in that the internal surface of said raised wall (**7**) is vertical.

13. Shower footboard according to claim 1 characterized in that the dihedral formed by the internal surface of said raised wall (**7**) and said plate (**1**) top surface has a rounded internal edge (**18**).

14. Shower footboard according to claim 1 characterized in that said plate (**1**) is provided at its lower surface with partition walls (**17**) or lugs determining a support for the plate (**1**) on a bottom floor (**19**).

15. Shower footboard according to claim 7 characterized in that the raised wall (**7**) on the sides of the footboard adjoining the part of the perimeter of the plate (**1**) where the narrow oblong opening (**3**) is located is interrupted at the point of said opening (**3**) in order to allow that a screen (**30**) is installed on a narrow strip (**31**) separating the opening (**3**) from said second stepped undercutting (**12**) in which said sealing means (**14**) is located.

16. Shower footboard according to claim 1 characterized in that it includes an L, U or I-shaped cross section profile (**32**) externally leaned against a strip close to the lower edge of a screen (**29**) leaned against the external surface of a part of the raised wall (**7**) not joined to an inwall, covering said strip.

17. Shower footboard according to claim 1 characterized in that it is made through molding a polymeric material with additives including a foaming agent and with fillers.

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