An installation unit with a profile or a profile surface and with a hand shower, which is held displaceably thereon and to which a shower hose leads, has a lateral slit on one side. The shower hose is led from the rear side of the profile surface through the lateral slit and runs from there in a groove-like depression up to the hand shower.
INSTALLATION UNIT FOR SANITARY DEVICES

FIELD OF USE AND PRIOR ART

[0001] The invention relates to an installation unit according to the precharacterizing clause of claim 1. Such installation units are also known as combination showers or are offered, for example, by the applicant under the name “shower panel”.

[0002] Of such combination showers, it is known that they have a forefront or profile on the front side, as a rule as an elongate vertically running front face, to which sanitary articles, such as removable head showers, permanently installed head showers or body showers, are fastened. A flexible shower hose as water supply for a removable hand shower normally emanates at one point from the installation unit and then leads to the hand shower.

OBJECT AND SOLUTION

[0003] The object on which the invention is based is to provide an installation unit mentioned in the introduction, by means of which problems of the prior art can be avoided and, in particular, a possibility is afforded of providing a conduit device, such as a shower hose, from the installation unit to the hand shower in a neat and undisruptive way.

[0004] This object is achieved by means of an installation unit having the features of claim 1 or 18. Advantageous and preferred embodiments of the invention are the subject-matter of the further claims and are explained in more detail below. The wording of the claims becomes the content of the description by express reference.

[0005] According to the invention, there is provision for a conduit device, such as a shower hose or the like, to be led from a rear side of the profile surface or front side through a laterally open slit in the profile surface and to lead to the sanitary article which is arranged or mounted on the front side. It is thereby possible for the conduit unit to be led to an important part behind the installation unit or behind the profile surface. This is advantageous, above all, for the situation where the sanitary article, together with the conduit unit, is arranged on the installation unit and is not removed. However, so that this can also be removed and used with a high degree of freedom as possible, the conduit device can as it were be taken out of the slit in such a way that it runs essentially free of the profile surface. Thus, for example in a hand shower, it is possible for this to be used conveniently with the greatest possible freedom. After use, the conduit device can be led again through the laterally open slit for neat stowage, and the sanitary article can be fastened to the profile surface again. The profile surface may also be a front side or a front plate.

[0006] Advantageously, the conduit device is fastened behind the profile surface or is fastened behind the front side to the installation unit and in this case, of course, is also connected so as to conduct water. This is particularly advantageous in an installation body arranged behind the front side, in which case the installation body may be a kind of box which forms the rear side of the installation unit and covers various devices, such as mixing valves and changeover valves, on the rear side. The profile surface or front side may be fastened to the installation body or be attached to the latter from the front. To be precise, in a preferred installation unit, this is a prefabricated and as it were largely independent structural unit which is connected only to a hot-water connection and a cold-water connection in a wall and has all the shower functional units, such as mixing valves, changeover valves or the like.

[0007] In a refinement of the invention, the lateral slit may be markedly longer than the thickness of the conduit device, so that the latter is led somewhat in. The slit may be, for example, two to five times longer. Advantageously, however, it does not reach too far into the profile surface, in particular to a lesser extent than half the entire width of the latter.

[0008] It is possible to cause the conduit device to emanate from one side of the installation unit and to provide the slit on the other side. In this case, the conduit unit may always run behind the profile surface, but may run beneath the abovementioned installation body from one side to the other. Thus, some freely movable length of the conduit device is afforded for the largely free movability of a hand shower connected to it.

[0009] It is advantageous if the conduit device is freely suspended between a fixed connection to the installation unit at one end and the connection to the sanitary article at its other end. Freely suspended means here, in particular, that, although it may be partially guided or bears against specific abutments or recesses, it can nevertheless basically be removed from these without any outlay, structural changes or the like.

[0010] In a refinement of the invention, there may be provision for the conduit device to be invisible between one end at the installation unit and the lateral slit. For this purpose, it may run in the installation unit or in an installation body behind it. For this purpose, it may, for example, be wound by means of a winding arrangement similar to a drum. However, the abovementioned possibility with the freely suspended conduit device is preferred.

[0011] It is advantageous if the lateral slit in the profile surface is bevelled or rounded upwards at the front edge and downwards at the rear edge transversely with respect to its longitudinal extent or in the direction of run of the conduit device, that is to say, advantageously, from the bottom upwards or vertically. This makes it possible for the conduit device to be led from the bottom rear upwards to the front through the profile surface which has a certain thickness, without the conduit device undergoing excessive bending or even kinking. In an advantageous development of the invention, there may be provision for a depression to be provided in the front side of the profile surface at the inner end of the slit, that is to say where the conduit device normally runs, suspended. This depression may correspond approximately to half the thickness of the conduit device, that is to say the conduit device can be to some extent countersunk therein. This, on the one hand, has the advantage that the said conduit device is then arranged securely and permanently in the slit and does not automatically move out. Furthermore, the passage of the conduit device through the profile surface from the rear forwards is then highly uniform, and the conduit device does not project or projects only a little forwards beyond the profile surface. Particularly advantageously, the depression has a depth such that the conduit device can be countersunk therein for a large part or even so as to be essentially flush with the surface.
The conduit device can run freely moveably between the slit in the profile surface and the fastening of the said conduit device to the installation unit. In particular, it is thereby possible that, after the removal of the sanitary article from the installation unit and the extraction of the conduit device from the slit, the entire conduit device is free of the profile surface and a sanitary article, such as, for example, a hand shower, connected to it can be used in the usual way and very conveniently.

According to a further aspect of the invention which, if appropriate, is independent, according to the invention, in an installation unit of the type mentioned in the introduction, a conduit device is led from the rear side of the profile surface through this to the front side to a sanitary article. For this purpose, an above-described slit may be provided in the profile surface. The conduit device is advantageously a flexible hose or shower hose. A depression or groove is provided on the profile surface from the passage of the conduit device through the profile surface or slit at least to just in front of the sanitary article. The conduit device is received at least partially or with the greatest part of its thickness in this depression. Thus, with a conduit device per se running freely or not being fastened, fixing is brought about between the passage and the sanitary article, so that the conduit device is as it were put away and neither projects disruptively nor can run in an unwanted way.

In an advantageous refinement of the invention, the depression runs completely from the passage or slit up to the sanitary article. The depression is preferably of a depth such that the conduit device can be countersunk completely therein. However, even with a conduit device which can be countersunk for a large part, for example by half or three quarters, very good lateral guidance against unwanted movement or misrunning of the conduit device is obtained.

In a refinement of the invention, it is possible to mount or hold the sanitary article moveably on the installation unit or the profile surface. A mounting for this purpose may be moveable, preferably displaceable. Particularly preferably, there may be provision for the mounting to be capable of being displaced parallel to the abovementioned depression. The mounting may itself be arranged displaceably in the depression. Thus, the installation unit can be designed or produced more simply. Furthermore, it is thereby possible for the conduit device to extend from the depression directly to the sanitary article located in the mounting. Such a depression may be in the form of a simple groove. For guiding an abovementioned mounting, it is advantageous if the depression has undercut or grooves so that the mounting sits in it securely and fixedly in terms of rotation.

In a refinement of the invention, at least one setting or changeover device may be provided on one side or lateral face of the installation unit or of the abovementioned installation body. The slit is then advantageously provided on the other side face. The conduit device advantageously leads away from this side.

These and further features may be gathered from the claims, but also from the description and the drawings, the individual features being capable of being implemented in each case in themselves or severally in the form of subcombinations in an embodiment of the invention and in other fields and being capable of constituting advantageous and independently patentable versions for which protection is claimed here. The subdivision of the application into individual sections and intermediate headings do not restrict the general validity of the statements made under these.

BRIEF DESCRIPTION OF THE DRAWINGS

An exemplary embodiment of the invention is illustrated diagrammatically in the drawings and is explained in more detail below. In the drawings:

FIG. 1 shows a top view of an installation unit according to the invention with a shower hose piercing a profile surface in the left-hand region,

FIG. 2 shows a side view of the installation unit according to FIG. 1 from the left,

FIG. 3 shows an enlargement of the region with the lateral slit through which the shower hose is led, and

FIG. 4 shows a corresponding enlargement of the region from FIG. 3 in a side view from the left.

DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENT

FIG. 1 illustrates an installation unit 11 according to the invention from the front and FIG. 2 a side view of the left-hand side. FIGS. 3 and 4 show enlargements. The installation unit 11 is of the basic type, such as is also sold by the applicant under the name of “shower panel”. Such an installation unit 11 is an independent and ready-equipped or operationally ready device, described in the introduction, which may be attached, for example, to a wall with water connections.

The installation unit 11 has a profile surface 13 with a front side 14 which may also be considered as a front plate and consists, in particular, of plastic, glass or metal. An installation body 16 is provided as a kind of box or housing on the rear side of the profile surface 13. The essential portion of the technology and also the water connections of the installation unit 11 are located in the said installation body. Changeover devices 17 and temperature controllers 18 having customary known functions project from the right-hand side, not explicitly illustrated, of the installation body 16. Below the temperature controller 18 is located a hose connection 20 from which a shower hose 21 as the conduit device emanates. The shower hose 21 runs first downwards on the right-hand side of the installation body 16 and there has a lower bend 22. It can be seen particularly from FIG. 2 how in this case the shower hose 21 runs from the right-hand side below the installation body 16 onto the left-hand side and is led upwards again there. It can be seen in this case how the shower hose 21 is for a large part also concealed from the side behind a side edge 24 of the installation body 16.

A lateral slit 25 is provided in the profile surface 13 of the front side 14 on the left a little below mid-height of the installation unit 11. The slit 25 is formed in an insert part 26 which is inserted into a corresponding recess in the profile surface 13. It may, however, also be made directly in the profile surface. The shower hose 21 executes an S-bend 27 here and as it were changes from the rear of the profile surface 13 to the front side of the latter.
The region of the lateral slit 25 has an upper projecting length 29 which can be seen above all from FIG. 4. Furthermore, a lower projecting length 32 is provided, having a corresponding rounding 33. It can be seen clearly from FIG. 4 how, in the run of the S-bend 27 of the shower hose 21, the latter cannot be led with the hose bend through the slit 25. For this purpose, as it were, the curvature of the S-bend 27 on the shower hose 21 must be made greater. Thus, the shower hose 21 is held firmly in the slit 25; however, as explained in more detail below, it can also be led out or taken out.

The slit 25 merges upwards into a depression start 35 which as it were again forms rearwards an indentation behind the upper projecting length 29, in such a way that the upper projecting length 29 markedly impedes a movement to the left of the shower hose 21. The depression start 35 merges upwards into the depression 36 which is illustrated by dashes in FIG. 4. The introduced shower hose 21 runs in it. In this case, it can also be seen how the shower hose 21 projects according to FIG. 4 a little beyond the depression 36, for example with about one third of its diameter. The depression 36 could even be designed, without high outlay, with a depth such that the shower hose 21 is completely countersunk therein or, in the side view according to FIGS. 2 and 4, can no longer be seen above the slit 25.

The depression 36 leads upwards, and advantageously, it goes upwards over the entire height of the installation unit 11. The shower hose 21 running therein leads to a hand shower 39. This, in turn, is held in a mounting 40 from which it can be extracted. The mounting 40 is likewise arranged in the depression 36, specifically movably along the depression. The hand shower 39 can thus be used as a head shower in the position illustrated in FIG. 1. It may, however, by the downward movement of the mounting 40, also be brought to a lower height.

For the free movability of the hand shower 39, the latter is taken out of the mounting 40. In this case, the shower hose 21 is moved out of the depression 36. In this state, there is free movability of the shower hose 21 between the slit 25 and the hand shower 39. For a further-extended freedom of movement, the shower hose 21 may be bent to a somewhat greater extent in the region of the slit 25 than with the S-bend 27 in the form according to FIG. 4. The shower hose 21 can then be moved out of the slit 25 to the left between the roundings 30 and 33. It is in this case at the same time projects behind the side edge 24 of the installation body 16. The shower hose 21 is then suspended freely between, on the one hand, the hand shower 39 and, on the other hand, either the bend 22 in the lower region of the installation unit 11 or else, if the hose region of this bend 22 is brought in front of the profile surface 13, only the hose connection 20. A very great length of the shower hose 21 is thus available freely moveably for a highly convenient and comfortable utilization of the hand shower 39.

After the use of the hand shower 39 with free movability, the shower hose 21 is again first brought with the lower bend 22 behind the profile surface 13. The shower hose is then introduced with a corresponding bend between the roundings 30 and 33 into the slit 25 again, the said shower hose then being virtually automatically into the deep depression start 35 and then, after the hand shower 39 is fastened to the mounting 40, likewise running virtually automatically along the depression 36 and therein again. Since the bend 22 of the shower hose is freely suspended at the bottom, its dead weight holds it downwards to some extent just so that, above all in the region of the depression 36, it is tensioned both straight and very slightly and therefore runs neatly in the depression.

If, in this position corresponding again to FIG. 1, the hand shower 39, together with a mounting 40, is moved downwards in the depression 36, only the lower bend 22 of the shower hose will be suspended further downwards and possibly appear below the profile surface 13. This, however, is not considered to be disturbing. Alternatively, it is possible to place the hose connection 20 even higher on the right-hand side, so that the bend 22 likewise runs considerably above the lower end of the profile surface 13. This as it were affords a larger region for the bend 22, in that the latter can be suspended further downwards and is still concealed by the profile surface 13.

The neat hose routing is thus achieved both by the lateral slit 25 with the roundings 30 and 33 at the projecting lengths 29 and 32 and by interaction with the depression start 35. The neat and put-away run of the shower hose 21 on the front side towards the hand shower 39 is achieved by means of the depression 36 which extends over this length.

1. Installation unit for sanitary devices, with at least one profile for mounting and attaching at least one sanitary article such as a shower, on a front side of said profile, said profile having a profile surface forming said front side and also having a rear side, said sanitary article being arranged in an upper area of said installation unit, wherein a conduit device such as a shower hose is led from said rear side through a laterally open slit in said profile surface to said sanitary article on said front side.

2. Installation unit according to claim 1, wherein setting devices are provided on said front side.

3. Installation unit according to claim 1, wherein said conduit device is fastened, behind said profile surface, to said installation unit.

4. Installation unit according to claim 3, wherein said conduit device is fastened, behind said profile surface, to an installation body being provided behind said profile surface.

5. Installation unit according to claim 1, wherein said conduit device emanates from said side of said installation unit lying opposite said slit.

6. Installation unit according to claim 5, wherein said conduit device is led, below a lower end of the installation body beyond which said profile surface projects downwards, onto said other side of said installation body as far as said slit.

7. Installation unit according to claim 1, wherein said slit is significantly longer than a thickness of said conduit device.

8. Installation unit according to claim 7, wherein said slit is two to five times as long as a thickness of said conduit device and shorter than half a width of said profile surface.

9. Installation unit according to claim 1, wherein said conduit device is guided, freely suspended, from a fixed or rigid connection with said installation unit to said sanitary article.

10. Installation unit according to claim 1, wherein said conduit device runs as far as said slit, so as to be invisible from said front side, within said installation unit.
11. Installation unit according to claim 10, wherein said conduit device is wound onto a winding arrangement.

12. Installation unit according to claim 1, wherein said slit is bevelled upwards at a front edge and downwards at a rear edge transversely with respect to a longitudinal extension or in a longitudinal direction of said conduit device.

13. Installation unit according to claim 1, wherein a depression is provided at an upper end of said slit in said front side of said profile surface.

14. Installation unit according to claim 13, wherein a depth of said depression corresponds to at least to half a thickness of said conduit device.

15. Installation unit according to claim 13, wherein said conduit device runs therein so as to be countersunk flush with said surface.

16. Installation unit according to claim 1, wherein said conduit device runs freely moveably below said slit and behind said profile surface, said conduit device being moveable freely and at a distance from said slit.

17. Installation unit according to claim 16, wherein said conduit device runs freely and at a distance from said profile surface after removal of said sanitary article from said installation unit and movement of said conduit device out of said slit.

18. Installation unit for sanitary devices, with at least one profile for mounting and attaching at least one sanitary article such as a shower on a front side, said profile having a profile surface forming said front side and also having a rear side, said sanitary article being arranged in an upper region of said installation unit, wherein a conduit device runs as a flexible hose from said rear side of said profile surface through this to said front side towards said sanitary article, a depression for receiving said conduit device being provided on said profile surface from a passage of said conduit device through said profile surface at least to just in front of said sanitary article.

19. Installation unit according to claim 18, wherein said depression extends completely up to said sanitary article.

20. Installation unit according to claim 18, wherein said conduit device can be countersunk largely or completely in said depression.

21. Installation unit according to claim 18, wherein said sanitary article can be fastened to a mounting being fastened on said profile surface, so as to be displaceable in a direction of said depression.

22. Installation unit according to claim 18, wherein said depression runs rectilinear with an approximately uniform cross section.

23. Installation unit according to claim 1 or 18, wherein setting devices or the like are provided on one side surface of said installation unit and said slit is provided on an other side surface.

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