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⑤④ **A system of a shower tray, waste and support.**

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Description

This invention relates to a system of a shower tray and a waste and support for the shower tray; and to a waste body adaptor which is part of the system.

Known, conventional shower trays have a drain hole in which a tail portion of a waste flange is located, the flange portion of the waste flange bearing on a seal which bears down on an upper surface of a flat portion of the floor of the shower tray adjacent the drain hole. The waste flange is held securely in position by means of a nut which engages an upper portion of an external thread on the tail portion of the waste flange, below the flat of the floor. The nut, when secured, causes the seal to be compressed thereby effecting an efficient seal.

The waste includes a trap which is provided with a running nut which is intended to engage a lower portion of the external thread on the tail portion of the waste flange. In practice, especially with shower trays having an integral side wall, it can be extremely difficult to tighten the running nut, and it can also be difficult to ensure that there is adequate support under the floor of the shower tray; generally, the greater the amount of support, the greater the degree of obstruction so far as tightening the running nut is concerned.

The problem of correctly installing a shower tray and its waste and support means can be greatly exacerbated when the shower tray is to be located in a recess defined by three walls with the waste means joining an effluent pipe which is inaccessible from the far side of one of the three walls.

According to one aspect of the present invention, there is provided a system of a shower tray (10) with waste (30) and support means (50, 60), the system being in dismantled, partially assembled or fully assembled form and comprising:

a shower tray (10) having a floor portion (11) provided with a flat (12) having a drain hole surrounded by a spigot (13) dependent from the flat (12);

support means (50, 60) capable of supporting the shower tray (10) and having a channel (54) for accommodating waste components (30) below the shower tray (10);

a waste flange (1) which has a flange portion (2) capable of resting on the flat (12) of the shower tray (10) and which has a tail portion (4) having a threaded portion (5) and capable of passing through the spigot (13) of the shower tray (10); and

a waste body adaptor (20) having (a) means (24) capable of resisting rotation of the adaptor (20) relative to the support means (50), (b) a recess (21) for accommodating a lower end region of the spigot (13) of the shower tray (10), (c) a threaded portion (22) for engagement with the complementary threaded portion (5) on the tail portion (4) of the waste flange (1), and (d) a portion (23) suitable, in use, for securing engagement with a waste trap (30):

the system being such that, when assembled, the spigot (13) is accommodated in the recess (b) (21) of the waste body adaptor (20), the flange portion (2) of the waste flange (1) rests on the flat (12) of the shower tray (10), the tail portion (4) of the waste flange (1) passes through the spigot (13) and securely engages the threaded portion (c) (22) of the waste body adaptor (20), the means (a) (24) cooperates with the support means (50) to prevent rotation of the waste body adaptor (20), and the support means (50, 60) provides support for the shower tray (10).

In the foregoing statement of invention, the reference numerals, which relate to the corresponding components illustrated in the drawings, are provided as an aid to the reader, without in any way limiting the components to those illustrated in the drawings.

The system, which can be packaged and sold as a combination of components in assembled or dismantled form, may optionally include two seals, the first seal being intended to fit around the tail portion of the waste flange and, in use, to be positioned between the flange portion of the waste flange and the flat of the shower tray; and the second seal being intended to fit around the spigot of the shower tray and, in use, to be positioned between the underside of the flat of the shower tray and an upper face of the waste body adaptor.

The support means may be, but does not necessarily need to be, in the form of two complementary components. The case in which the support means is in the form of two components is described in much greater detail hereinbelow.

Another aspect of the present invention is the waste body adaptor itself. This aspect provides a waste body adaptor having threaded portions intended for connection to a waste trap and to a tail portion of a waste flange, with a floor portion of a shower tray between the waste body adaptor and the waste flange; wherein that region of the waste body adaptor which is to face the waste flange is provided with a recess for accommodating a spigot dependent from the floor portion of the shower tray; and wherein an external side wall region of the waste body adaptor is provided with at least one projection intended, when abutting a secure member, to resist rotation of the waste body adaptor when the flange is being secured thereto.

The secure member referred to in the immediately preceding paragraph could be, in practice, part of the support means referred to as a component of the first-mentioned aspect of the present invention.

The waste body adaptor which itself constitutes the second-mentioned aspect of the present invention can thus be regarded as an adaptor having (a) means for resisting rotation relative to a support means, (b) a recess for accommodating a lower end region of a spigot of a shower tray, (c) a threaded portion for engagement with a complementary threaded portion on a tail portion of a waste flange, and (d) a portion suitable, in use, for

engagement with a waste trap.

The provision of the spigot dependent from the flat of the shower tray is an important and novel feature of the shower tray which constitutes a component of the system of the present invention.

In order to install the system constituting the first-mentioned aspect of the present invention, the support means (or at least one component thereof when the support means is constituted by two or more components) is correctly positioned, which can be accomplished with the aid of a template provided by the supplier. The template will enable the support means to be positioned correctly not only with regard to an effluent pipe (which may already be fixed in position by a builder), but also with regard to the area in which the shower tray is to be located so that the shower tray is located securely in the correct position.

With the support means, or at least part of the support means, appropriately located and secured, for example by screws screwed into the floor of the building, a waste trap can be secured to the effluent pipe and the waste body adaptor can be secured with respect to the waste trap. In practice, the support means will have slots or other holes for locating the projections or other means on the waste body adaptor for resisting rotation relative to the support means.

A seal, the second of the two aforementioned seals, can then be positioned on top of the waste body adaptor, and then the shower tray can be lowered into position. Depending on the nature of the support means already in position, the shower tray may be provided with one or more further component of support means secured to the underside of the shower tray so that, when the shower tray is lowered into the correct position, it has its floor portion adequately supported by virtue of the support means which by then rest(s) on the floor of the building.

As the shower tray is lowered into position, the spigot of the shower tray is accommodated within the recess (b) of the waste body adaptor.

With the shower tray thus correctly positioned and supported, a seal, the first of the two aforementioned seals, is located around the tail portion of the waste flange, and the tail portion is then passed down into the spigot of the shower tray. After passing through the spigot the threaded tail portion of the waste flange can, upon rotation of the waste flange, be caused to engage with the appropriate threaded portion (c) of the waste body adaptor.

A key provided with a plurality of lugs which engage in the holes of a grid in the waste flange can be used for rotating the waste flange with respect to the waste body adaptor, so as to ensure a good seal in the region of the two seals.

The shower tray forming part of the system of the present invention may have a thickness (prior to forming) of, for example, 4, 4.5 or 5 mm and may be formed from, for instance, so-called 10 percent acrylic on ABS. In this material, the acrylic can be PMMA (polymethylmethacrylate), and the

ABS is a terpolymer of acrylonitrile, butadiene and styrene, the terpolymer occupying approximately 90% of the thickness of the material.

The shower tray may have, but need not have, an integral side wall. The present invention is particularly advantageous for shower trays having an integral side wall in view of the limited accessibility to the underside of the shower tray, which has proved such a problem in the past.

The shower tray can have the drain hole in any convenient position and is not limited to any particular position, although for aesthetic purposes and ease of plumbing, it is convenient to have the drain hole at the so-called centre back position.

The shower tray may, in its floor region, be provided with some suitable anti-slip means, such as numerous small raised portions.

The shower tray may, in addition, be provided with a gulley near the edge of the floor portion so that water drains from the floor portion into the gulley and is then led around the gulley to the drain hole, conveniently positioned at the centre back position.

In addition to the support means referred to above and described in greater detail below, the underside of the tray may be provided with a strengthening plate which not only strengthens the floor portion of the shower tray but also serves to spread any load applied to the floor portion. The strengthening plate may be constructed of any convenient material, preferably a relatively inexpensive material, such as chipboard, for instance chipboard having a thickness of 12 mm.

The spigot which is dependent from the flat of the shower tray may extend downwardly by a distance in the range from 9.5 to 12.7 mm below the underside of the flat. The flat is conveniently immediately adjacent the spigot.

As regards the support means it is possible to employ a single support means and such a support means is contemplated within the scope of the invention.

However, it is particularly convenient to employ a support means in the form of a first support and a second support, the first support being intended to be secured to the floor of the building before installation of the shower tray, and the second support being intended to be positioned at the time that the shower tray is installed. In fact, for convenience and security, the second support may be supplied by the supplier already secured to the underside of the shower tray, with the aforementioned strengthening plate between an upper portion of the second support and the underside of the floor of the shower tray.

The first and second supports may be, and preferably are, complementary in that, apart from the channel for accommodating the waste components below the shower tray, the first and second supports occupy substantially the whole of the space below the floor portion of the shower tray so as to provide full support for the shower tray.

Preferably, but not necessarily, the first support has the form of a truncated cone with the base of the cone having a larger diameter than the flat top of the cone, so that the side wall of the cone tapers upwardly. Conveniently the channel provided in the conical first support is in such a position that the axis of the conical first support can pass through the centre of the spigot of the shower tray, when those components are correctly positioned. The second support preferably then has a form which corresponds to the space below the shower tray apart from the conical shape of the first support and apart from any channel in the second support for an effluent pipe.

The channel in the first support can be adapted to be suitable to accommodate a conventional 38 mm (1.5 inch) diameter waste trap having a waste seal depth of 19 or 76 mm (0.75 or 3 inch). The advantage of having a circular conical form for the first support is that it can be rotated appropriately so that the waste body adaptor and waste trap can be correctly lined up with the effluent pipe, and the fact that the first support is of circular conical form means that it can be rotated relative to the second support without causing any undue problems, provided that the second support is in the correct position for accommodating the effluent pipe.

The first support is preferably provided with means for securing the first support to the floor of the building. Thus, the first support may be provided with screw holes through which screws may be passed to secure the first support to the floor of the building.

The first support can have, in addition to the aforementioned channel, slots or other recessed regions for accommodating the projections or other means which extend from the side wall of the waste body adaptor and which are intended to prevent rotation of the waste body adaptor relative to the first support.

The support means, for example the first and second supports, can be formed from expanded polystyrene, for instance a high density expanded polystyrene.

As regards the waste body adaptor this must, as indicated above, have (a) means for resisting rotation relative to the support means, for example projections in the form of wings from the side of the adaptor; (b) a recess for accommodating a lower end region of the spigot of the shower tray; (c) a threaded portion for engagement with a complementary threaded portion on the tail portion of the waste flange; and (d) a portion suitable, in use, for engagement with a waste trap. The waste body adaptor may be formed of a suitable injection moulded plastics material. It may have, for example, a height of 37 mm, although the actual dimensions may be varied considerably depending on the dimensions of the waste flange, the waste trap, and the intended height between the floor portion of the shower tray and the floor of the building.

As regards the waste flange, again the dimensions may be varied considerably depending on

the size of the shower tray and the magnitude of the waste body adaptor. However, by way of example, a waste flange having a flange portion with a diameter of 74 mm and a tail portion with a height of 25 mm may be suitable.

As regards the seal between the underside of the flange portion of the waste flange and the flat of the shower tray, this may be formed from, for instance, polypropylene.

As regards the seal between the underside of the flat and the upper face of the waste body adaptor, this may be formed from, for example, a synthetic rubber material.

For a better understanding of the present invention and to show how the same may be carried into effect, reference will now be made, by way of example, to the accompanying drawings, in which:

Figure 1 shows, in exploded form, partially as a side view and partially as a vertical section, some of the components of one embodiment of the system of the present invention;

Figure 2 shows, on a reduced scale and as an oblique view from above, the components shown in Figure 1 and also the first support;

Figure 3 shows, on a further reduced scale and as a vertical section, a shower tray with strengthening means and the second support secured to the underside of the shower tray, the second support being complementary to the first support shown in Figure 2;

Figure 4 is a vertical section through the same components as shown in Figure 3, but with the components shown in Figure 2 also present;

Figure 5 is a plan of the system shown in Figure 4; and

Figure 6 is a view, mainly from the side but slightly from above, of the waste flange shown in Figure 1 and of a key suitable for rotating the waste flange.

Referring first to Figure 1, in the main, there is shown a waste flange generally indicated by the reference 1, which has a flange portion 2, a grid 3 (shown most clearly in Figures 5 and 6), and a dependent tail portion 4 provided over the majority of its length with an external screw thread 5.

Also shown in Figure 1 is a seal 6, in this case a polypropylene seal, which is intended to surround the non-threaded portion of the tail portion of the waste flange 1.

In Figure 1 only a small portion of the shower tray, generally indicated by the reference numeral 10, is shown. The illustrated portion includes part of the floor portion 11 which is provided with a slightly recessed flat 12 (for accommodating the flange portion 2 of the waste flange 1), dependent from which flat 12 is an integral spigot 13, which defines a drain hole.

Other components of the shower tray 10 will be described later hereinbelow.

Also shown in Figure 1 is the waste body adaptor generally indicated as 20, which has an internal recess 21 intended to accommodate the spigot 13 of the shower tray 10. An intermediate

portion of the internal surface of the waste body adaptor 20 is provided with a screw thread 22 intended to engage the screw thread 5 of the waste flange 1. A lower region of the waste body adaptor 20 is provided with an external screw thread 23. Projecting diametrically from the upper and intermediate portions of the external side wall of the waste body adaptor 20 are two radial projections 24.

Shown resting on an upper portion of the waste body adaptor 20 is a seal 25, in this case one formed of synthetic rubber, which is intended to provide a seal in the region between the upper part of the waste body adaptor 20 and the underside of the flat 12 of the shower tray 10.

Also shown in Figure 1 is a waste trap generally indicated by the reference numeral 30, which is provided at one end with a running nut 31 and at the opposite end with a screw thread 32. The running nut 31 has an internal screw thread intended to engage the external screw thread 23 of the waste body adaptor 20; and the external screw thread 32 is intended to be gripped by a running nut 71 at the end of an effluent pipe 70 (shown in Figures 2 and 4).

Figure 2, in addition to showing on a reduced scale the components illustrated in Figure 1, shows a first support generally indicated by the reference numeral 50, the first support 50 having a generally circular base 51, a generally circular top face 52 and an upwardly tapering side wall 53. The support 50, which may be formed from expanded polystyrene, is generally solid apart from: a channel 54 intended to accommodate waste components, two slots 55 intended to accommodate the projections 24 of the waste body adaptor 20, two scooped out portions 56 and two screw holes 57 (only one of which is shown).

The first support 50 is intended to support and locate the waste body adaptor 20 and waste trap 30, as well as supporting part of the floor portion 11 of the shower tray 10. When correctly positioned on the floor 90 of a building, perhaps with the aid of a template provided by the supplier, the first support 50 can be secured to the floor 90 of the building by means of screws 58 which are secured through the screw holes 57. In this arrangement the projections 24 on the waste body adaptor 20 will be located in the slots 55, thereby preventing any rotation of the waste body adaptor 20 relative to the waste trap 30 when the waste flange 1 is rotated with respect to the adaptor 20.

Figure 3 shows, in full, the shower tray 10 with its floor portion 11, flat 12 and spigot 13. Also shown on the floor portion 11 are raised portions 14 to resist slipping. The floor portion 11 is surrounded by an inner, upward, side wall 15 at the top of which is a rim 16 dependent from which is an outer side wall 17. At the foot of the inner side wall 15 is a gulley 18 which communicates with the flat 12 so that water draining from the floor portion 11 can be carried by the gulley 18 to the region of the flat 12 and, from there, down

through the drain hole defined by the spigot 13.

Underneath a major portion of the floor portion 11 is a strengthening panel 40 which, in this particular case, is secured to the underside of the floor portion 11 (although this need not be the case).

Also shown, and occupying a major portion of the space below the shower tray 10 is the second support 60 which is provided with a large conical void 61 the dimensions of which correspond to the corresponding external dimensions of the first support 50. In the embodiment illustrated (although this need not be the case) the second support 60 is secured to the underside of the shower tray 10, and may, like the first support 50, be formed of a high density expanded polystyrene.

Figure 4 shows the case in which the components illustrated in Figure 2 are accommodated within the void 61 of the second support 60 shown in Figure 3. Thus Figure 4 is the equivalent to the combination of the components in Figure 2 (in assembled form) and those in Figure 3 (if one disregards the shower tray 10 of Figure 2).

It is clear from Figure 4 that the waste body adaptor 20 and the waste trap 30 are accommodated within the first support 50. An appropriate channel in the second support 60 and in an appropriate region of the right hand side wall 17 (as viewed in Figure 4) is necessary to accommodate the effluent pipe 70 and the running nut 71.

In the event that a deep, as opposed to shallow, water seal is required, then it may well be necessary to provide a suitable pit within the floor 90 of the building to accommodate a deep trap such as that shown by discontinuous lines 30A in Figure 4.

Figure 5 is a plan of the system shown in Figure 4, the extent of the strengthening panel 40 being shown as a discontinuous line. Also, the gulley 18 is clearly shown, as is the manner in which it leads to the flat 12.

As regards Figure 6, the waste flange 1 has already been described in connection with Figure 1, and there is also shown a key 80 having a generally cylindrical body 81 with two arms 82 and six dependent lugs 83 capable of being introduced into the holes in the grid 3 of the waste flange 1, for rotating the waste flange 1 during assembly.

The method of installing the system illustrated in the drawings will now be described.

Assuming that the shower tray 10 is to be positioned in a particular place, which in practice may be determined by the position of an existing effluent pipe 70, a template (not shown, but provided by the supplier) can be placed on the floor 90 of the building and positioned correctly with respect to the effluent pipe 70.

The waste body adaptor 20 can then be secured to the waste trap 30 by screwing the running nut 31 onto the screw thread 23, there being a seal to ensure no leakage. The waste trap 30 can be a conventional waste trap as obtained at a builders' merchant, and the waste body adaptor 20 is in

accordance with the present invention.

With the waste body adaptor 20 and the waste trap 30 secured together, the combination of the two can be lowered into the channel 54 in the first support so that the projections 24 of the adaptor 20 are accommodated within the slots 55 of the first support 50.

The effluent pipe 70 is then securely connected to the other end of the waste trap 30 by means of the running nut 71 engaging the screw thread 32.

The first support 50 is then secured to the floor 90 of the building by means of the screws 58 located in the holes 57.

The seal 25 is then placed on the upper part of the waste body adaptor 20.

The already combined assembly shown in Figure 3, namely the shower tray 10, strengthening panel 40 and second support 60, is then lowered into position carefully so that the spigot 13 passes through the seal 25 and comes to rest in the recess 21 in the upper part of the waste body adaptor 20.

As the assembly illustrated in Figure 3 is being lowered into position the second support 60 moves down around the first support 50. Depending on the size of the effluent pipe 70 and running nut 71 it will be necessary for a channel of appropriate dimensions to be provided in the rear side wall and adjacent region of the second support 60 (i.e. at the right hand portion shown in Figures 3 and 4).

Once the assembly illustrated in Figure 3 is correctly and securely positioned with regard to the first support 50 and the waste body adaptor 20, the seal 6 is placed on the flat 12, and then the waste flange 1 is lowered into position and rotated by means of the key 80 (shown in Figure 6) so that the screw thread 5 on the tail portion 4 of the waste flange 1 engages the screw thread 22 in the intermediate portion of the waste body adaptor 20. With the waste flange 1 and waste body adaptor 20 properly secured with respect to each other the seals 6 and 25 provide effective sealing.

An advantage of the system of the present invention is that, should there be any blockage in, for instance, the waste trap 30, it is a simple matter to use the key 80 to release the waste flange 1 thereby providing clear access to the waste body adaptor 20 and thence to the waste trap 30.

In addition to the accessibility of the waste trap 30 (by removal of the waste flange 1), the system of the present invention provides easy installation together with positive support and positive location of the shower tray 10.

For do-it-yourself operations, which are becoming increasingly popular, the effluent pipe 70 and waste trap 30 can be conventional components acquired from a builders' merchant. A person wishing to install the shower tray can then purchase the system of shower tray, support means, waste adaptor and waste flange. The purchased package should include an appropriate template, screws for securing the support means

to the floor of the building (or other suitable fixing means), and the necessary seals (for example seals 6 and 25).

The effluent pipe 70 need not run directly rearwards, as shown in the illustrated embodiment. Instead, it can run along any desired line, in view of the permitted rotation of the first support 50 relative to the second support 60.

Claims

1. A system of a shower tray with a waste and support means, the system being in dismantled, partially assembled or fully assembled form and comprising:

a shower tray having a floor portion provided with a flat having a drain hole surrounded by a spigot dependent from the flat;

support means capable of supporting the shower tray and having a channel for accommodating waste components below the shower tray;

a waste flange which has a flange portion capable of resting on the flat of the shower tray and which has a tail portion having a threaded portion and capable of passing through the spigot of the shower tray; and

a waste body adaptor having (a) means capable of resisting rotation of the adaptor relative to the support means, (b) a recess for accommodating a lower end region of the spigot of the shower tray, (c) a threaded portion for engagement with the complementary threaded portion of the tail portion of the waste flange, and (d) a portion suitable, in use, for securing engagement with a waste trap:

the system being such that, when assembled, the spigot is accommodated in the recess (b) of the waste body adaptor, the flange portion of the waste flange rests on the flat of the shower tray, the tail portion of the waste flange passes through the spigot and securely engages the threaded portion (c) of the waste body adaptor, the means (a) cooperates with the support means to prevent rotation of the waste body adaptor, and the support means provides support for the shower tray.

2. A system according to Claim 1, which also includes two seals, the first seal being intended to fit around the tail portion of the waste flange and, in use, to be positioned between the flange portion of the waste flange and the flat of the shower tray; and the second seal being intended to fit around the spigot of the shower tray and, in use, to be positioned between the underside of the flat of the shower tray and an upper face of the waste body adaptor.

3. A system according to Claim 1 or 2, wherein the waste body adaptor has radial, outwardly directed projections for accommodation within corresponding slots in the support means, to prevent rotation of the adaptor relative to the support means.

4. A system according to any preceding claim, wherein the waste body adaptor is an injection

moulded hollow body formed of a plastics material.

5. A system according to any preceding claim, wherein the waste body adaptor has a height of approximately 37 mm.

6. A system according to any preceding claim, wherein the shower tray has a thickness, (prior to forming) of 4, 4.5 or 5 mm, approximately 90% of the thickness of the material from which the shower tray is formed being an acrylonitrile butadiene styrene polymer and approximately the uppermost 10 percent being formed of a polymethylmethacrylate.

7. A system according to any preceding claim, wherein the shower tray has an integral side wall.

8. A system according to any preceding claim, wherein the drain hole of the shower tray is provided in the centre back position.

9. A system according to any preceding claim, wherein the shower tray is provided with a drainage gulley around the perimeter of the floor portion and lower than the floor portion, the gulley communicating with the drain hole.

10. A system according to any preceding claim, wherein the spigot projects 9.5 to 12.7 mm below the flat in the floor portion of the shower tray.

11. A system according to any preceding claim, wherein a strengthening panel is provided below a major portion of the floor portion of the shower tray.

12. A system according to any preceding claim, wherein the support means is constituted by a first support and a second support both capable of extending, in use, between the underside of the shower tray and a floor on which the shower tray is to be positioned.

13. A system according to Claim 12, wherein the first support and second support are complementary and, when together, occupy substantially all of the space below the shower tray, apart from the channel.

14. A system according to Claim 12 or 13, wherein the second support is secured to the underside of the shower tray.

15. A system according to Claim 12, 13 or 14, wherein the first support has a general form of a truncated cone tapering upwardly, and the second support occupies the majority of the space below the shower tray but is provided with a void corresponding to the truncated cone of the first support.

16. A system according to Claim 15, wherein the first support of conical form is of circular cross-section.

17. A system according to one of Claims 12 to 16, wherein the first support is provided with slots for accommodating projections from the waste body adaptor.

18. A system according to any preceding claim, wherein the support means is formed of expanded polystyrene.

19. A system according to any preceding claim, wherein the waste flange has a flange portion with a diameter of approximately 74 mm and a

tail portion having a height of approximately 25 mm.

20. A waste body adaptor having threaded portions intended for connection to a waste trap and to a tail portion of a waste flange, with a floor portion of a shower tray between the waste body adaptor and the flange portion of the waste flange; wherein that region of the waste body adaptor which is to face the waste flange is provided with a recess for accommodating a spigot dependent from the floor portion of the shower tray; and wherein an external side wall region of the waste body adaptor is provided with at least one projection intended, when abutting a secure member, to resist rotation of the waste body adaptor when the waste flange is being secured thereto, the waste body adaptor optionally being formed by injection moulding a plastics material and optionally having a height of approximately 37 mm.

21. An adaptor according to Claim 20, wherein the external side wall region of the adaptor is provided with two diametrically opposed, outwardly projecting, projections.

Patentansprüche

1. Brausetassen-Garnitur mit einem Ablauf und einer Trageinrichtung, wobei sich die Garnitur in zerlegtem teilweise oder gänzlich zusammengebautem Zustand befindet, bestehend aus: einer Brausetasse mit einem Bodenteil, der mit einer Vertiefung mit einem von einem von der Vertiefung nach unten abstehenden Rohransatz umgebenen Ablaufloch versehen ist, einer Trageinrichtung, die zur Abstützung der Brausetasse ausgebildet ist und einen Kanal zur Aufnahme von Ablaufbauteilen unter der Brausetasse aufweist, einem Ablaufflansch mit einem auf die Vertiefung der Brausetasse auflegbaren Flanschteil und einem Halsteil, der durch den Rohransatz der Brausetasse hindurchführbar, sowie mit einem Gewindeabschnitt versehen ist, und

einem Ablaufstutzen mit (a) einer Einrichtung zur Sicherung des Ablaufstutzens gegen Drehung bezüglich der Trageinrichtung, (b) einer Ausnahme zur Aufnahme des unteren Endbereiches des Rohransatzes der Brausetasse, (c) einem Gewindeabschnitt zum Verschrauben mit dem komplementären Gewindeabschnitt des Halsteiles des Ablaufflansches und (d) einem zum Anschluß eines Ablaufsyphons ausgebildeten Ansatz,

wobei bei zusammengebaute Garnitur der Rohransatz in der Ausnahme (b) des Ablaufstutzens sitzt, der Flanschteil des Ablaufflansches auf der Vertiefung der Brausetasse aufliegt, der Halsteil des Ablaufflansches durch den Rohransatz hindurchtritt und mit dem Gewindeabschnitt (c) des Ablaufstutzens verschraubt ist, die Einrichtung (a) mit der Trageinrichtung gegen Drehung des Ablaufstutzens mit der Trageinrichtung zusammenwirkt und die Trageinrichtung die Abstützung für die Brausetasse bildet.

2. Garnitur nach Anspruch 1, dadurch gekennzeichnet, daß sie ferner zwei Dichtungen aufweist, von denen die erste Dichtung rund um den Halsteil des Ablaufflansches paßt und im Gebrauch zwischen dem Flanschteil des Ablaufflansches und der Vertiefung der Brausetasse angeordnet ist und die zweite Dichtung rund um den Rohransatz der Brausetasse paßt und im Gebrauch zwischen der Unterseite der Vertiefung der Brausetasse und einer oberen Stirnfläche des Ablaufstutzens angeordnet ist.

3. Garnitur nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß der Ablaufstutzen radiale, auswärtsgerichtete Vorsprünge zum Einsetzen in entsprechende Schlitze der Trageinrichtung aufweist, die zur Sicherung des Ablaufstutzens gegen Drehung bezüglich der Trageinrichtung dienen.

4. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß der Ablaufstutzen als hohler Spritzgußteil aus Kunststoff ausgebildet ist.

5. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß der Ablaufstutzen eine Höhe von angenähert 37 mm aufweist.

6. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß die Brausetasse (vor der Formung) eine Dicke von 4, 4,5 oder 5 mm aufweist und angenähert 90% der Dicke des Materiales, aus dem die Brausetasse geformt ist, aus einem Acrylnitrilbutadienstyrolpolymer und angenähert die obersten 10% aus einem Polymethylmethacrylat bestehen.

7. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß die Brausetasse eine einstückige Seitenwand besitzt.

8. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß das Ablaufloch der Brausetasse in der Mitte der Rückseite angeordnet ist.

9. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß die Brausetasse mit einer entlang des Umfanges des Bodenteiles verlaufenden Sammelrinne versehen ist, die tiefer als der Bodenteil liegt und mit dem Ablaufloch verdunden ist.

10. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß der Rohransatz um 9,5 bis 12,7 mm von der Vertiefung im Bodenteil der Brausetasse absteht.

11. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß unter dem überwiegenden Bereich des Bodenteiles der Brausetasse eine Verstärkungsstafel vorgesehen ist.

12. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß die Trageinrichtung von einem ersten und einem zweiten Träger gebildet ist, die sich beide im Gebrauch zwischen der Unterseite der Brausetasse und einem Fußboden erstrecken, auf dem die Brausetasse angeordnet ist.

13. Garnitur nach Anspruch 12, dadurch gekennzeichnet, daß der erste und der zweite Träger

zueinander komplementär sind und in vereinigt Zustand im wesentlichen den gesamten Raum unter der Brausetasse mit Ausnahme des Kanales einnehmen.

14. Garnitur nach Anspruch 12 oder 13, dadurch gekennzeichnet, daß der zweite Träger an der Unterseite der Brausetasse befestigt ist.

15. Garnitur nach den Ansprüchen 12, 13 oder 14, dadurch gekennzeichnet, daß der erste Träger im wesentlichen die Form eines nach oben verjüngten Kegelstumpfes aufweist und der zweite Träger den überwiegenden Raum unter der Brausetasse einnimmt, jedoch mit einer dem Kegelstumpf des ersten Trägers entsprechenden Ausnehmung versehen ist.

16. Garnitur nach Anspruch 15, dadurch gekennzeichnet, daß der erste Träger mit konischer Form kreisförmigen Querschnitt aufweist.

17. Garnitur nach einem der Ansprüche 12 bis 16, dadurch gekennzeichnet, daß der erste Träger mit Schlitzen zur Aufnahme der Vorsprünge des Ablaufstutzens versehen ist.

18. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß die Trageinrichtung aus geschäumtem Polystyrol geformt ist.

19. Garnitur nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß der Ablaufflansch einen Flanschteil mit einem Durchmesser von angenähert 74 mm und einen Halsteil mit einer Höhe von angenähert 25 mm aufweist.

20. Ablaufstutzen mit Gewindeabschnitten zum Anschluß an einen Ablaufsyphon und an den Halsteil eines Ablaufflansches unter Anordnung des Bodenteiles einer Brausetasse zwischen dem Ablaufstutzen und dem Flanschteil des Ablaufflansches, wobei derjenige Bereich des Ablaufstutzens, der dem Ablaufflansch gegenüberliegt, mit einer Ausnehmung zur Aufnahme eines vom Bodenteil der Brausetasse nach unten abstehenden Rohransatzes versehen ist, und wobei ein Außenbereich der Seitenwand des Ablaufstutzens mit wenigstens einem Vorsprung versehen ist, der bei Anschlag an einem Sicherungsglied zur Sicherung des Ablaufstutzens gegen Drehung dient, wenn der Ablaufflansch daran befestigt ist, und der Ablaufstutzen gegebenenfalls als Kunststoff-Spritzgußteil geformt ist und gegebenenfalls eine Höhe von angenähert 37 mm aufweist.

21. Ablaufstutzen nach Anspruch 20, dadurch gekennzeichnet, daß der Außenbereich der Seitenwand des Ablaufstutzens mit zwei diametral einander gegenüberliegenden, nach außen vorspringenden Vorsprüngen versehen ist.

Revendications

1. Installation de cuvette de douche comprenant un écoulement et des moyens de support, l'installation étant à l'état démonté, partiellement assemblé ou entièrement monté, et comprenant: une cuvette pourvue d'un fond présentant un méplat muni d'un trou de vidange entouré par un rebord s'étendant vers le bas depuis le méplat;

des moyens de support capables de supporter la cuvette et présentant un canal destiné à recevoir des éléments d'écoulement sous la cuvette;

une bouche d'écoulement présentant une bride capable de reposer sur le méplat de la cuvette ainsi qu'un prolongement tubulaire présentant une portion filetée et capable de passer à travers le trou de vidange que forme le rebord de la cuvette, et un raccord d'écoulement comprenant (a) des moyens capables de résister à la rotation du raccord relativement aux moyens de support, (b) une cavité destinée à recevoir la région terminale inférieure du rebord de la cuvette, (c) une portion taraudée destinée à venir engager une portion filetée complémentaire du prolongement tubulaire de la bouche d'écoulement et (d) une portion destinée à venir se fixer à un siphon; l'installation étant telle, lorsqu'elle est assemblée, que le rebord vient se loger dans la cavité (b) du raccord, la bride de la bouche d'écoulement demeurant sur le méplat de la cuvette, le prolongement tubulaire de la bouche passant à travers le rebord et venant se fixer à la portion taraudée (c) du raccord, les moyens (a) coopèrent avec les moyens de support pour empêcher la rotation du raccord, et les moyens de support assurent le support de la cuvette.

2. Installation selon la revendication 1, laquelle comprend également deux joints, le premier joint étant destiné à venir se placer autour du prolongement tubulaire de la bouche d'écoulement, et, lors de l'utilisation, à être positionné entre la bride de la bouche et le méplat de la cuvette, et le second joint étant destiné à venir se placer autour du rebord de la cuvette, et, lors de l'utilisation, à être positionné entre la face inférieure du méplat de la cuvette et une face supérieure du raccord.

3. Installation selon la revendication 1 ou 2, dans laquelle le raccord présente des prolongements radiaux dirigés vers l'extérieur, destinés à être reçus dans des rainures correspondantes des moyens de support, ceci pour empêcher la rotation du raccord relativement aux moyens de support.

4. Installation selon l'une quelconque des revendications précédentes, dans laquelle le raccord est constitué par un corps creux en matériau plastique moulé sous pression.

5. Installation selon l'une quelconque des revendications précédentes, dans laquelle le raccord a une hauteur d'environ 37 mm.

6. Installation selon l'une quelconque des revendications précédentes, dans laquelle la cuvette a une épaisseur (avant le formage) de 4, 4,5 ou 5 mm, environ 90% de l'épaisseur du matériau constituant la cuvette étant un copolymère de styrène-acrylonitrile-butadiène, les 10 autres pour cent supérieurs étant formés par un polyméthacrylate de méthyle.

7. Installation selon l'une quelconque des revendications précédentes, dans laquelle la cuvette présente une paroi latérale venue d'une pièce avec elle.

8. Installation selon l'une quelconque des

revendications précédentes, dans laquelle le trou d'écoulement de la cuvette est prévu dans la position centre arrière.

9. Installation selon l'une quelconque des revendications précédentes, dans laquelle la cuvette est pourvue d'une rigole de drainage autour du périmètre du fond et inférieure à celui-ci, la rigole communiquant avec le trou d'écoulement.

10. Installation selon l'une quelconque des revendications précédentes, dans laquelle le rebord s'étend de 9,5 à 12,7 mm au-dessous du méplat prévu dans le fond de la cuvette.

11. Installation selon l'une quelconque des revendications précédentes, dans laquelle un panneau de renforcement est prévu sous la majeure partie du fond de la cuvette.

12. Installation selon l'une quelconque des revendications précédentes, dans laquelle les moyens de support sont constitués par un premier support et par un second support tous les deux capables, lors de l'utilisation, de s'étendre entre la face inférieure de la cuvette et un plancher sur lequel la cuvette est destinée à être disposée.

13. Installation selon la revendication 12, dans laquelle le premier support et le second support sont complémentaires et, lorsqu'ils sont disposés ensemble, occupent sensiblement tout l'espace situé sous la cuvette à l'exception du canal.

14. Installation selon l'une quelconque des revendications 12 et 13, dans laquelle le second support est fixé à la face inférieure de la cuvette.

15. Installation selon l'une quelconque des revendications 12 à 14, dans laquelle le premier support a la forme générale d'un cône tronqué allant en se rétrécissant vers le haut et le second support occupe la majeure partie de l'espace situé sous la cuvette mais présente une cavité correspondant au cône tronqué du premier support.

16. Installation selon la revendication 15, dans laquelle le premier support de forme tronconique est de section transversale circulaire.

17. Installation selon l'une quelconque des revendications 12 à 16, dans laquelle le premier support présente des rainures destinées à recevoir des saillies du raccord.

18. Installation selon l'une quelconque des revendications précédentes, dans laquelle les moyens de support sont en polystyrène expansé.

19. Installation selon l'une quelconque des revendications précédentes, dans laquelle la bouche d'écoulement présente une bride dont le diamètre est d'environ 74 mm et un prolongement tubulaire dont la hauteur est d'environ 25 mm.

20. Raccord d'écoulement comprenant des portions filetées destinées à être reliées à un siphon d'écoulement et à un prolongement tubulaire d'une bouche d'écoulement, avec une partie du fond d'une cuvette de douche disposée entre le raccord et la bride de la bouche d'écoulement, raccord dont la région destinée à faire face à la bouche d'écoulement présente une cavité destinée à recevoir un rebord s'étendant vers le bas depuis le fond de la cuvette, et dont l'une des parois latérales extérieures est pourvue d'au

moins une saillie destinée, lorsqu'elle vient buter contre un organe fixe, à empêcher la rotation du raccord lorsque la bouche d'écoulement lui est fixée, le raccord par exemple étant en un matériau plastique moulé sous pression et ayant une hauteur de 37 mm.

21. Raccord selon la revendication 20, caractérisé en ce que la zone de ladite paroi latérale extérieure présente deux prolongements diamétralement opposés, s'étendant vers l'extérieur.

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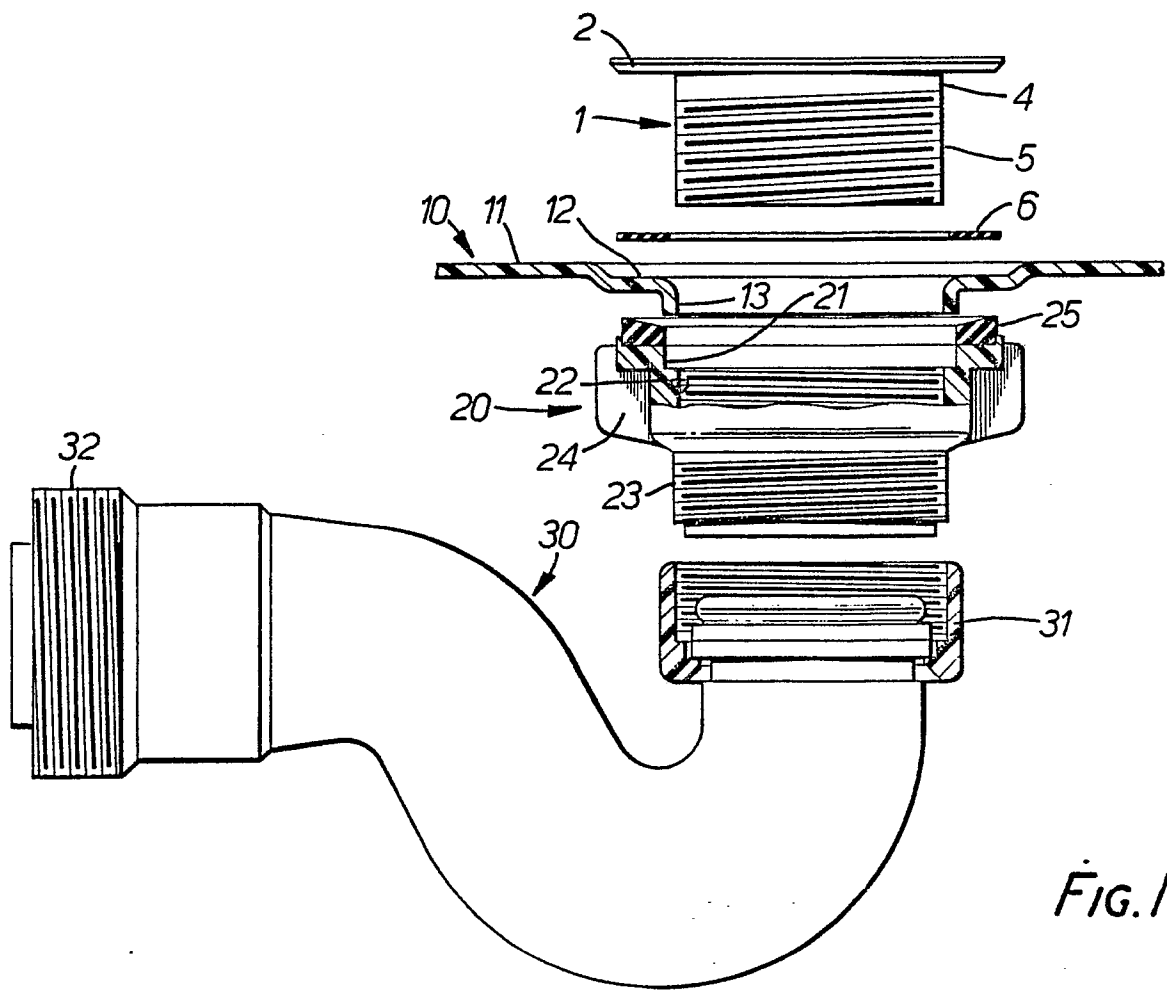
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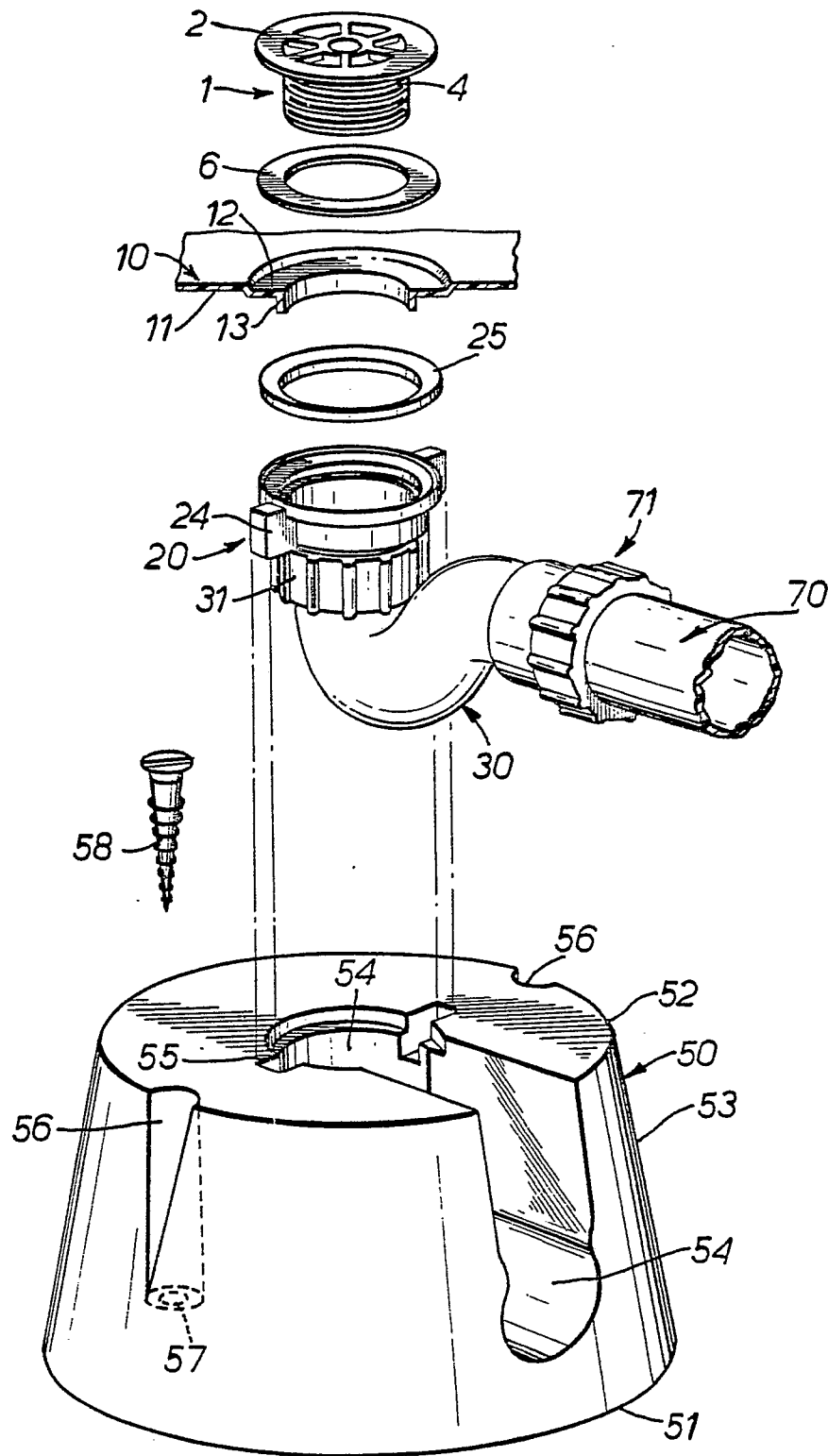
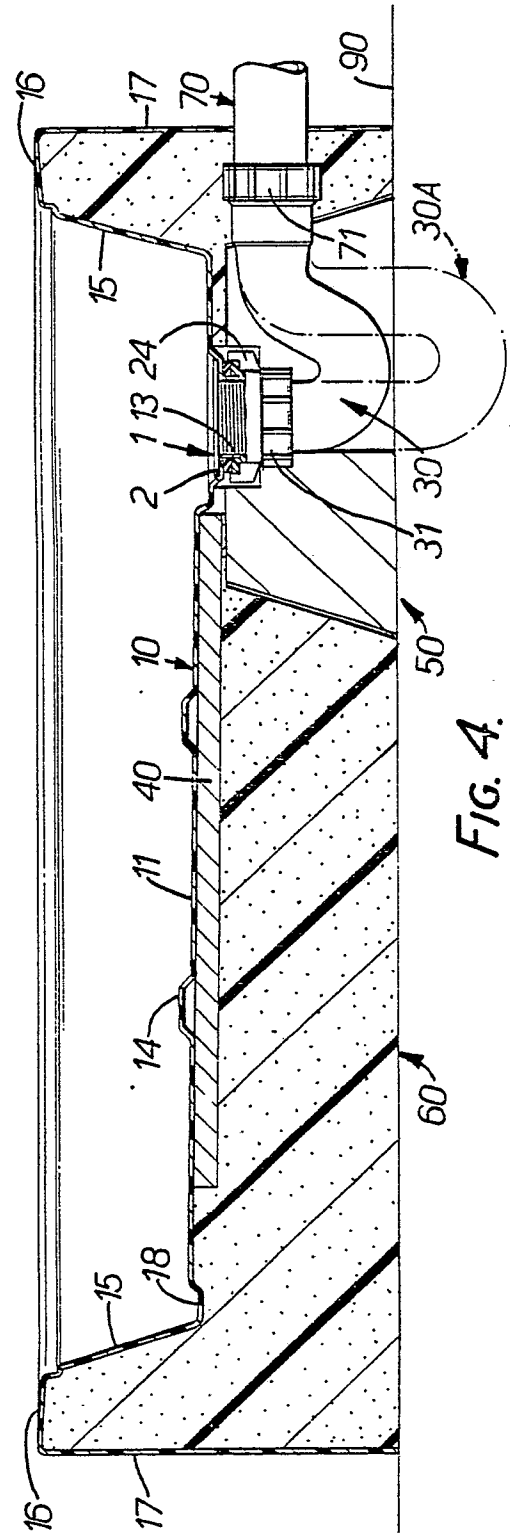
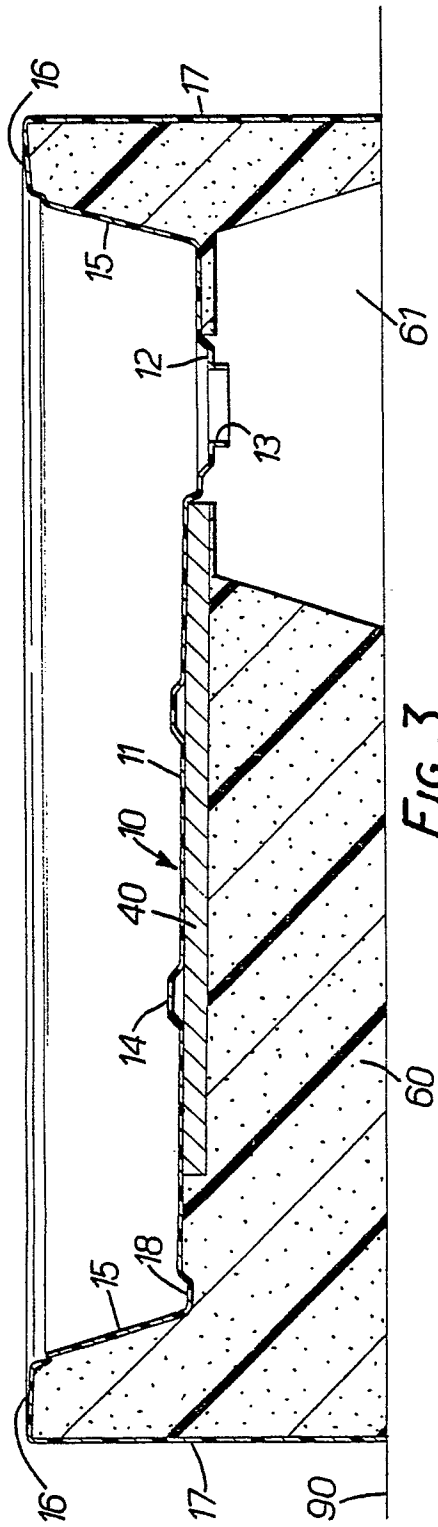


FIG. 2.



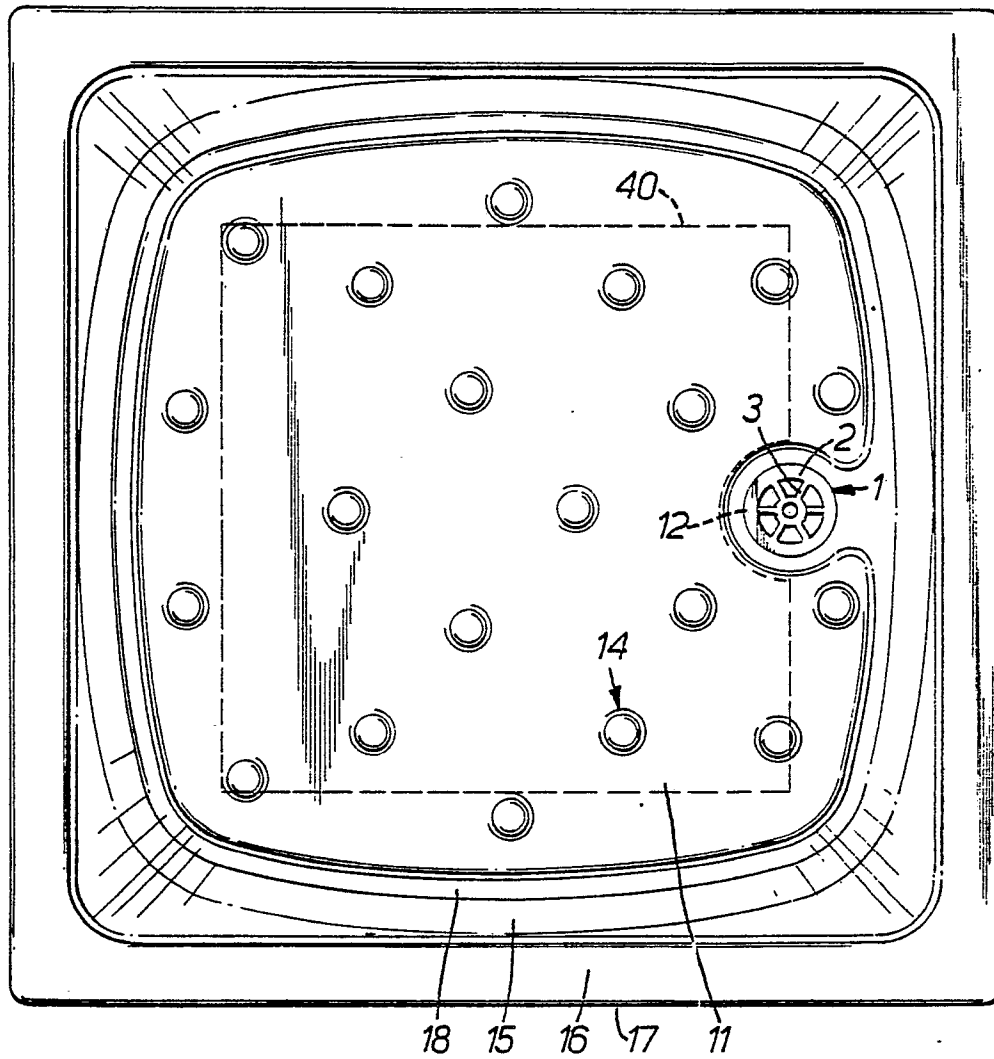


FIG. 5.

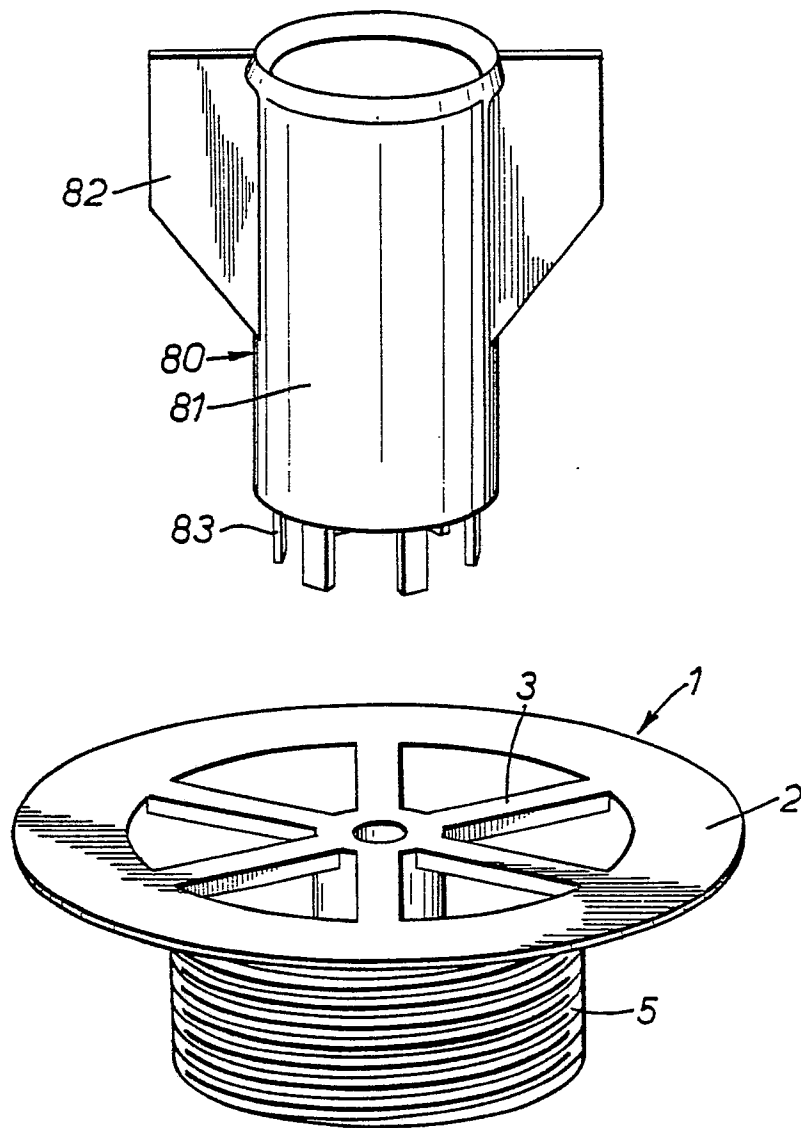


FIG. 6.