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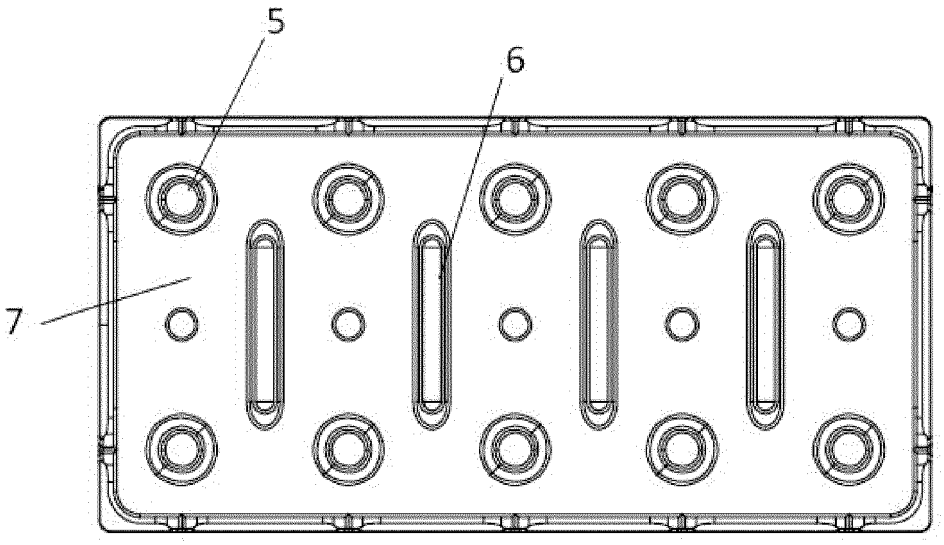
(54) Antislip coating

(57) Antislip coating characterised in that it comprises one or more tiles made of a compressible material in which each tile comprises an upper surface (2), some side pieces (3), some notches (4) made in said side pieces, an inner recess and a number of protrusions (5) and (6) on their bottom part, wherein at least some of them are appropriate for attaching the tiles to some attachment elements.

FIG.2



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Description

[0001] As its name indicates, the present invention relates to an antislip coating that can be installed simply on potentially slippery surfaces, although its use is open and it may be applied on any surface; it is particularly useful in children's play areas, childcare centres and the like, as it is made of a compressible material that can cushion possible falls.

[0002] The field of the art to which it belongs is that of surface coatings.

BACKGROUND

[0003] Certain surfaces have well-known problems, such as the surfaces used in areas next to swimming pools, showers, changing rooms and the like, which when wet are highly slippery.

[0004] A number of solutions have been used in the past, among which one of the most popular is providing rough areas on the floor.

[0005] However, these rough areas cannot be made on all surfaces. For example, they can be used in swimming pools or changing rooms, but not in shower trays.

[0006] In addition, said rough areas reduce the slipping coefficient but result in other drawbacks, such as abrasions in case of fall or difficulty in cleaning them.

[0007] In other cases, a wood flooring is used slightly raised above the surface to cover, so that the water can run under it. However, the wood generally suffers from rotting or mould.

[0008] Plastic structures are also know that solve the above-described drawbacks, but these tend to crack or break, producing sharp edges that make them dangerous.

DESCRIPTION OF THE INVENTION

[0009] To solve the above-described drawbacks, the invention disclosed herein comprises a set of floor tiles made of a flexible and compressible material, pleasant to the touch, with anti-slip properties, which is appropriate for use on any surface and is easily removable in order to clean the covered surface.

[0010] The tiles are provided on their bottom face with a number of protrusions that allow their use on a smooth surface or on external attachment means.

[0011] Since the tiles have an internal recess, water can run freely under them avoiding trapped water and allowing them to be placed on the drains themselves, which are thereby concealed.

[0012] The external attachment means can consist of a base surface with protruding lugs, although the invention disclosed is more versatile and comprises means of attachment between the various tiles.

[0013] These means of attachment in turn comprise one or more parts having a shape that allows joining one set of attachment means to another and, when placing the tiles on them, joining the tiles to one another in order to define a surface formed by tiles attached to one another.

[0014] Specifically, in the foreseen embodiment these means of attachment consist of two circular parts respectively located on either side of an arm that connects them.

[0015] The bottom shape of one of the circular parts is complementary to the top shape of the other, so that several of these elements may be connected in a line.

[0016] To prevent the rotation of one part on another, protrusions have been provided in one of the parts that is inserted in the other.

[0017] To facilitate the union of one element to another, the arm that connects the two rings has a different profile on each of its ends, one end having a marked relief and the other being flat, allowing it to be housed in some spaces provided in the skirt of one of the circular parts of the ends.

[0018] These parts are completely versatile, as the tiles, due to their bottom shape that greatly prevents slipping, can be applied directly on a smooth surface to be covered.

[0019] They can also be applied directly on a surface, such as a conventional shower tray, with dimensions substantially matching those of the tile, thereby preventing undesired slipping.

[0020] Their bottom shape allows joining them to a surface provided with protruding lugs, although in this case a surface prepared for this purpose is required.

[0021] However, the preferred use that will completely prevent slipping and provide a compact surface is by using the means of attachment.

[0022] To join several tiles, it is enough to join the corresponding number of attachment elements and then place the tiles on them.

[0023] The tiles will then be attached to each other and one cannot move without moving the rest, so that by joining several ones their combined weight will keep them from moving.

BRIEF DESCRIPTION OF THE DRAWINGS

[0024]

FIGURE 1 represents a perspective view of one of the coating tiles (1) showing the upper face (2), the sides (3), and a series of notches (4) that allow the arm of the attachment elements and water to pass through them.

FIGURE 2 represents the bottom face of one of the tiles showing a number of protrusions (5) that can engage the ends of the attachment elements (not shown here), and also shows other protrusions (6) meant to provide a support for the tile on the floor, as the rest of the tile (7) is hollow.

FIGURE 3 represents one of the attachment ele-

ments, showing the circle-shaped ends (8) and (8a) in which their ends are different, the bottom face (not shown here) of end (8a) being complementary to the upper face of the end (8), the two ends being joined by a central arm (9) with two different ends, one end having a greater relief (10) and the other being more flat (11) and suitable for being housed in the recesses (12) of another identical element that is joined to it. It also shows a number of protrusions shaped as a crown (17) which, when inserted in a series of orifices (18) made in the end (8a), which must be the end of another attachment element, prevent one part from rotating about the other.

FIGURE 4 represents a side view of one of the attachment elements, showing the central arm (9) that finishes differently in each of its parts, its end (10) having a greater relief than its other end (11), the ends having the circular elements with the upper face of the end (8) being complementary to the bottom face of the end (8a).

FIGURE 5 represents a series of attachment elements joined to each other in a row, showing an exploded view of the last element (13) with respect to the rest, revealing how the bottom face of the end (8a) is complemented by the upper face of the end (8) of another identical element or one that at least comprises one end with the geometry of the end (8a), the central orifice (14) with a suitable shape and dimensions always being free and located at a proper distance from the next orifice to allow housing the different protrusions shown in FIGURE 2 and referenced by the number (5).

FIGURE 6 represents an alternative for the installation of the tiles on a surface (15) that already has a number of protrusions (16) with a geometry that allows the protrusions of the tiles (5) shown in FIGURE 2 to be housed in and attached to said surface.

FIGURE 7 relates to a different embodiment where the tile, for which the bottom face is shown, is smaller and has only a single row of protrusions (5).

DESCRIPTION OF AN EMBODIMENT OF THE INVENTION

[0025] An embodiment of the invention is described below without limiting the different alternative embodiments.

[0026] The antislip coating comprises:

[0027] A series of tiles made of a compressible material where each tile comprises an upper surface (2), some side pieces (3) provided with a number of notches (4), an inner recess (7), a series of protrusions (5) and (6), wherein the protrusions have a structural function to provide strength and solidity to the assembly, and in the case of rounded protrusions (5) also carry out the function of attaching the assembly firmly to a previously prepared surface such as that in FIGURE 6, or to attachment elements of the type shown in FIGURES 3, 4 and 5.

[0028] In EXAMPLE 1 of an embodiment of the invention, the tiles defined are placed on a surface as that shown in FIGURE 6, being immobilised by the effect of the protrusions provided on said surface, which interact with the geometry of the inner face of the tiles.

[0029] In this example, the tiles are not joined to each other but instead are joined individually to the surface.

[0030] The tiles are easily removable to facilitate cleaning.

[0031] In EXAMPLE 2 the tiles are fitted on one or more rows of attachment elements, so that they are attached to each other, their movement being linked so that their combined weight will keep them in their position, particularly when a user is on them.

[0032] In this example the tiles are not attached to the surface, instead being attached to the attachment elements.

Claims

1. ANTISLIP COATING **characterised in that** it comprises one or more tiles made of a compressible material in which each tile comprises an upper surface (2), some side pieces (3), some notches (4) made in said side pieces, an inner recess and a number of protrusions (5) and (6) on their bottom part, wherein at least some of them are appropriate for attaching the tiles to some attachment elements.

2. ANTISLIP COATING according to claim 1, **characterised in that** the attachment elements comprise several parts with elements for attaching them to one another.

3. ANTISLIP COATING according to the previous claim, **characterised in that** the attachment elements comprise a central arm (9) and the ends (8) and (8a).

4. ANTISLIP COATING according to the previous claim, **characterised in that** the central arm (9) has one end with a relief (10) and the opposite one with a flat profile (11).

5. ANTISLIP COATING according to claim 3, **characterised in that** the ends each have a central orifice with a size and shape appropriate for receiving the protrusions (5) provided on the bottom faces of the tiles.

6. ANTISLIP COATING according to claim 3, **characterised in that** the geometry of the bottom face of the end (8a) is complementary to the geometry of

the upper face of the end (8).

7. ANTISLIP COATING according to the previous claim, **characterised in that** the ends (8) and (8a) have means for preventing rotation.

8. ANTISLIP COATING according to claim 4, **characterised in that** the end (8a) is provided on its skirt with a series of notches that can receive the end with a flat profile (11) of the central arm (9).

9. ANTISLIP COATING according to claim 1, **characterised in that** the attachment element is a surface (15) with a number of protrusions (16) that have a shape, size and arrangement suitable for receiving and attaching the tiles.

FIG.1

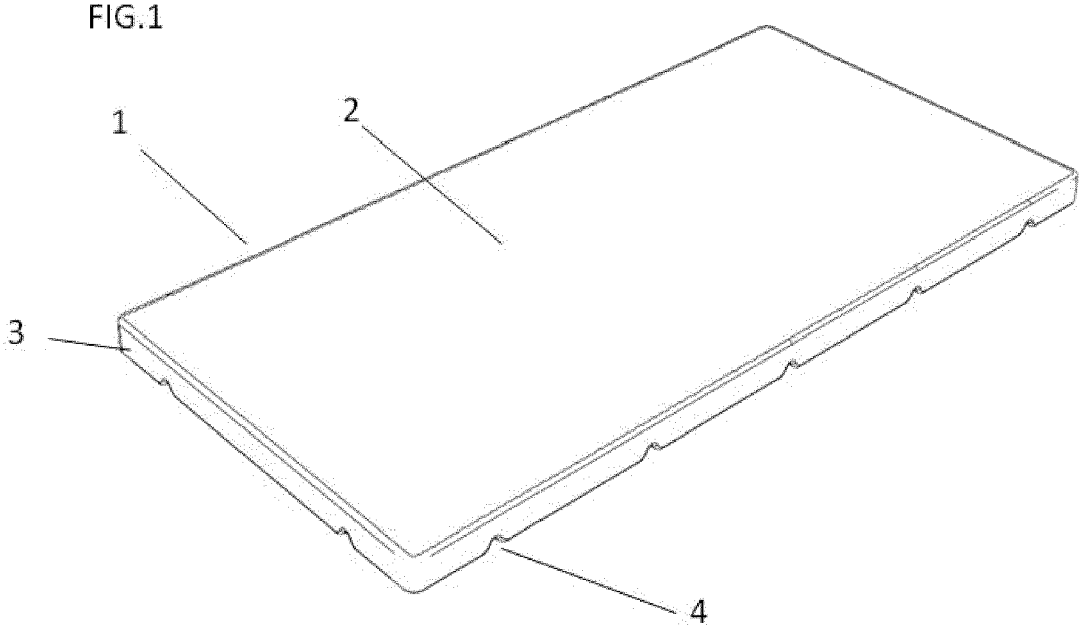

FIG.2

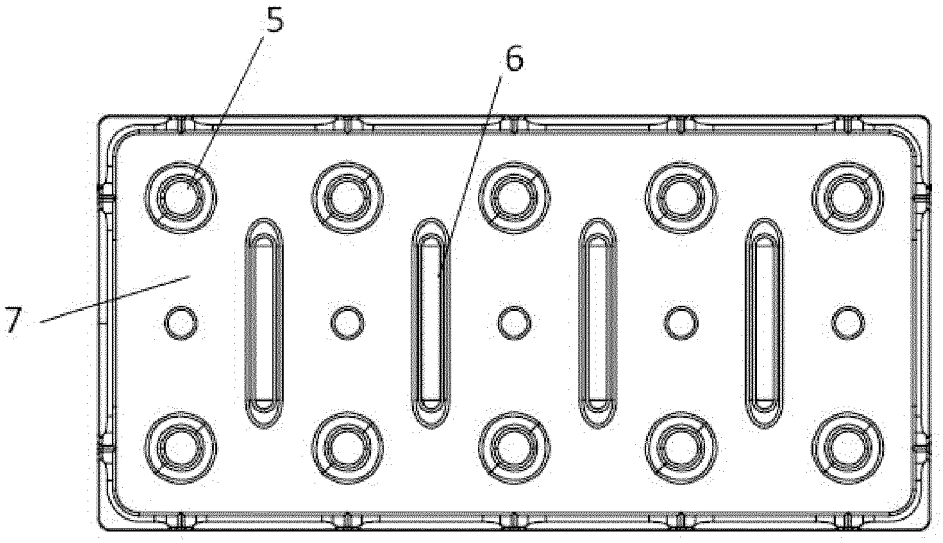

FIG.3

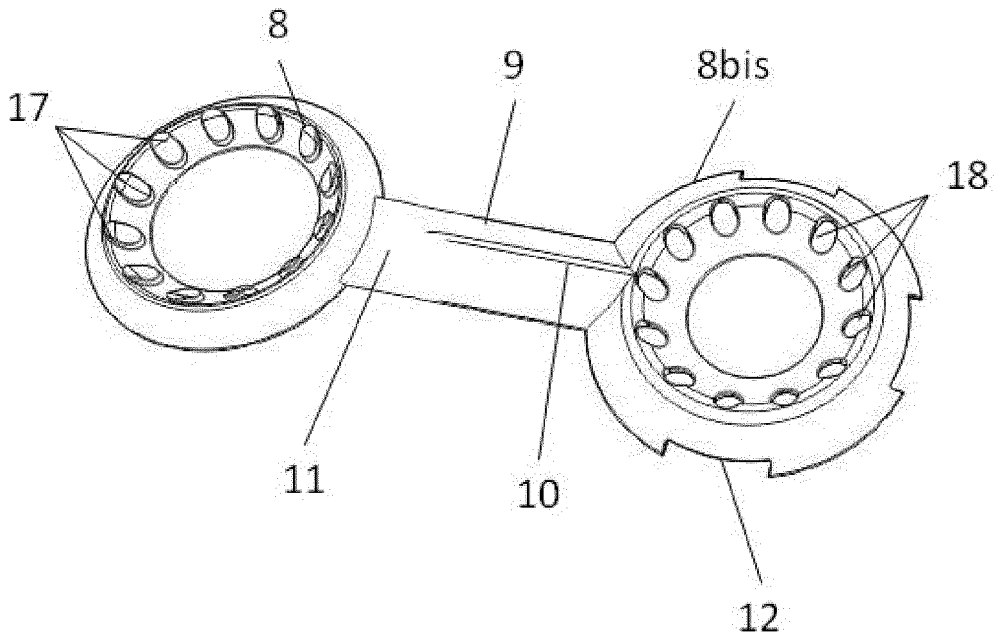

FIG.4

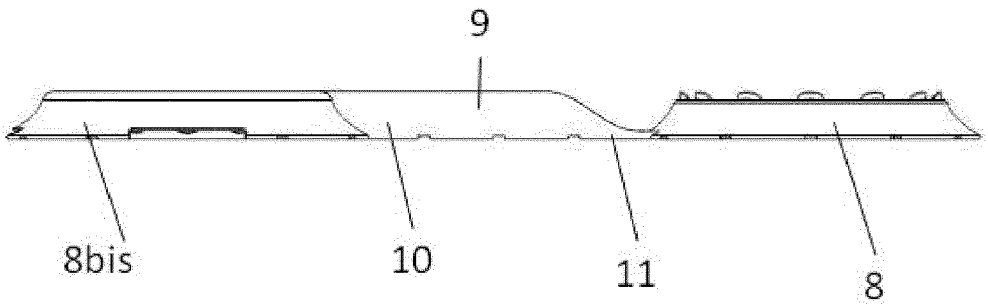

FIG.5

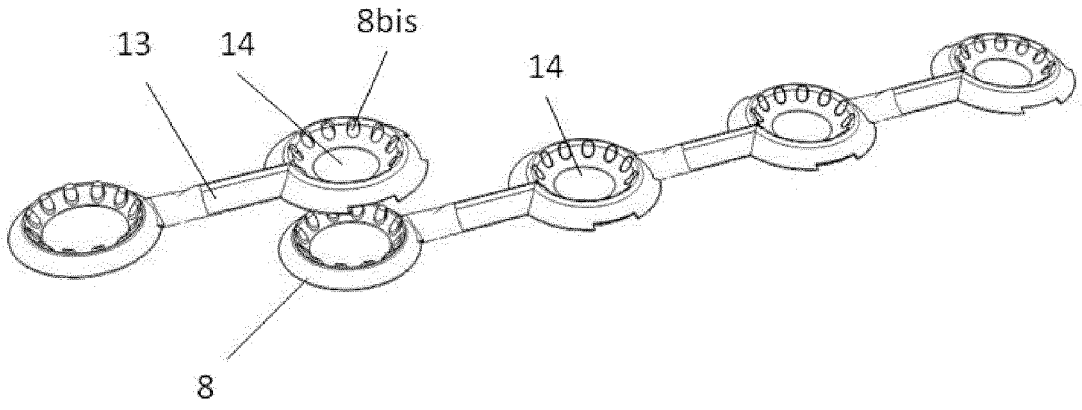

FIG.6

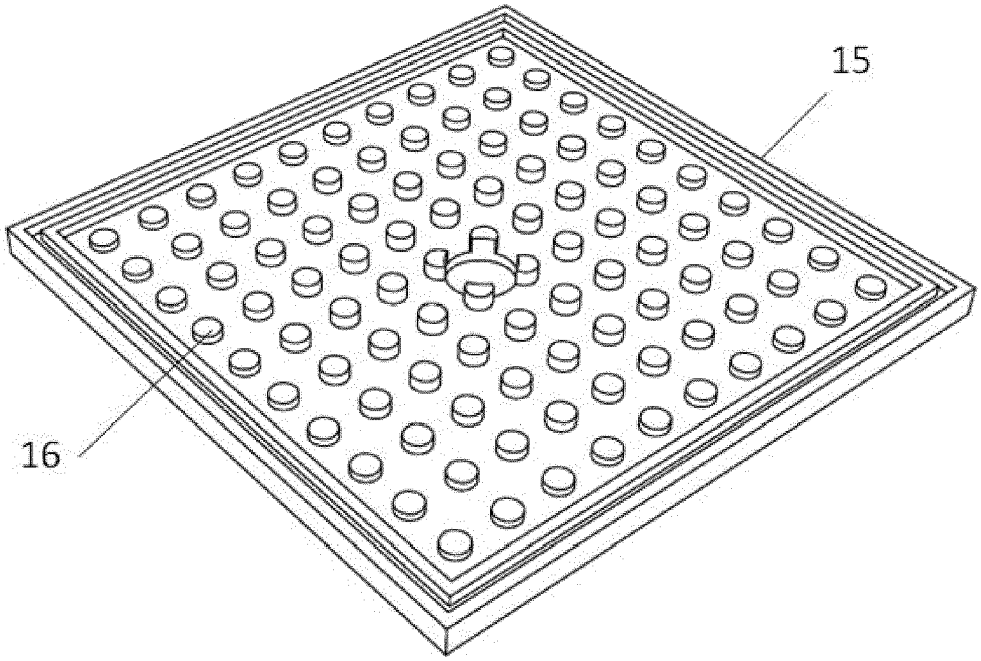

FIG.7