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(54) Floor element and method for making a floor element

Bodenelement und sein Herstellungsverfahren

Elément de plancher et son procédé de fabrication

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Description

Field of the Invention

[0001] The present invention concerns a floor element where there is provided at least one side wall around a floor surface integrated with the floor for abutting on a wall in a room in which the floor element is applied, where a drain is provided in the floor surface and where a drain stub is mounted in a drain area which in use is situated at the lowest part of the floor surface.

[0002] The invention furthermore concerns a method for making a floor element where there is provided at least one side wall around a floor surface integrated with the floor for abutting on a wall in a room in which the floor element is applied, where a drain is provided in the floor surface and where a drain stub is mounted in a drain area which in use is situated at the lowest part of the floor surface.

Background of the Invention

[0003] The new wet room regulations require wet room precautions everywhere in the shower booth. Presently, this is effected by applying a kind of rubber skin in a layer thickness of about 2 mm, or by fitting a kind of plates. By the said means it will still be difficult to ensure a 100% sealing at the joints, as e.g. the floor will always work in a different way than the walls. It will also be difficult to ensure sealing between floor and drain bowl/drain depression.

[0004] Various cast floors forming the bottom in wet rooms and in shower booths are known. Such cast floors are cast on site. A drain with drain bowl is selected depending on the shape of the room and/or shower booth. It is possible to mount a drain first and then to cast the floor around the drain. Alternatively, a drain is mounted after casting the floor. In both cases, a sealing joint is to be laid around the drain.

[0005] Moreover, sealing joints are to be laid at the edges of the room/shower booth where the floor surface meets the wall surfaces.

[0006] It is a common problem in bathrooms or other wet rooms that the joints break apart. The joints are often made of silicone. It is not uncommon that such joints will loose adhesion to floor, wall or drain bowl after three to four years.

[0007] Home buyer's reports with marked deficiencies associated with shower booths or wet rooms due to insufficient or defective sealing joints at the bottom of the shower booths will thus appear very frequently.

[0008] Also, it is known with shower booth bottoms which are pre-cast in plastic, glass fibre, steel or ceramics. Such bottoms may be put in place in a bathroom. Together with walls and doors, the bottom will form a complete shower booth or shower cabinet. This will usually be a loose item which may be quickly fitted and removed again. Use of such construction usually necessi-

tates that the floor upon which the bottom is placed, is made according to common sealing requirements for a wet room. The design is inexpedient, as interspaces appear between the bottom and the floor in the room. Moreover, there will be a risk of leaks in pipes connecting a drain from the bottom and a floor drain in the room.

[0009] Such pre-cast shower booth bottoms will usually be bowl-shaped, as a floor surface and side wall extending up from the floor surface will be formed integrally. In such bottoms there will be provided a hole in which a drain or drain bowl is usually retrofitted. Thus there may be a risk of leaking in the rubber joint around the drain in such a pre-cast shower booth bottom.

[0010] Floor elements of the type described by way of introduction are known from DE 100 60 401 A1, DE 20 2004 004277 U1 and US 6,643,863 B1.

[0011] US 6,643,863 B1 represents the closest prior art and discloses all features mentioned in the introductory paragraph.

[0012] This document does not disclose:

- that the floor element is cast in polymeric concrete
- that the drain is made integral with the floor element,
- that the floor surface includes a drain depression with a bottom
- that a drain stub is cast into the bottom of the drain depression,
- that the drain depression has an encircling wall.

[0013] Thus the known floor element does not provide a secured most loaded area with regard to water in a bathroom, namely a shower booth.

Object of the Invention

[0014] It is thus the object of the present invention to indicate a floor element of the type specified in the introduction which may be used as floor plate and as a shower booth basin, and which simultaneously enables avoiding the drawbacks of the floor designs that are cast on site and at the same time attain the advantages of prefabricated, pre-cast shower booth bottoms.

[0015] Furthermore, it is desired to secure the most loaded area with regard to the water in a bathroom, namely the shower booth, that the bottom and a section up along the walls are 100% sealed so that the remaining precautions can be made much more easily.

Description of the Invention

[0016] According to the present invention, this is achieved with a floor element of the type specified in the introduction, which is peculiar in that the floor element is cast in polymeric concrete, that the drain is made integral with the floor element, that the floor surface includes a drain depression with a bottom which is countersunk relative to the remaining part of the floor surface which has an even fall towards the drain depression, that a drain

stub and/or a water trap is cast into the bottom of the drain depression and that the drain depression has an encircling wall, the upper edge of which being disposed with spacing above the surrounding part of the floor surface, in order that the floor surface may be covered with a surface covering, e.g. tiles, as the said spacing corresponds to the thickness of the surface covering.

[0017] The method according to the invention is peculiar in that the element is cast in polymeric concrete, that the drain is made integral with the floor element, that the floor surface includes a drain depression with a bottom which is countersunk relative to the remaining part of the floor surface which has an even fall towards the drain depression, that a drain stub and/or a water trap is cast into the bottom of the drain depression, and that the drain depression has an encircling wall, the upper edge of which being disposed with spacing above the surrounding part of the floor surface, in order that the floor surface may be covered with a surface covering, e.g. tiles, as the said spacing corresponds to the thickness of the surface covering.

[0018] By drain depression as used in the present application is meant any kind of depression or recess. Thus it does not need to be an elongated drain recess. The drain depression may be square, edged, round or have other shapes in which the drain stub is mounted. The floor surface surrounding the drain depression will be at a level higher than the bottom of the drain depression, so that water from the floor surface of the element will run towards the drain depression and then via a fall in the drain depression itself towards the drain stub/water trap which is cast into the bottom of the drain depression. It is possible to make a water trap with so low installation height that the entire water trap can be cast into the bottom, but it is also possible to let a stub from a water trap pass through the bottom and have a drain bowl under the bottom.

[0019] Since the drain depression has a drain depression wall, the upper edge of which being provided above the surrounding part of the floor surface, it becomes possible to make a traditional surface covering with linoleum, tiles or other, only ensuring that the drain depression wall has a thickness corresponding to the thickness of the surface covering. Subsequently, it will be possible to place a grate element in the drain depression, if desired. Such a grate element may be disposed on a recess in the drain depression wall or rest directly on the bottom, so that the surface of the drain grate will correspond to the upper edge of the wall and thereby the level of the floor surface in the finished shower booth basin.

[0020] With a system according to the present invention, it will be possible to make a unit cast in one with integrated drain so that a guaranteed sealing is ensured between floor and drain stub/drain bowl and between floor surface and walls in the room where the element is used. Moreover, one may also ensure a guaranteed sealed shower booth. Thus there will be no risk that water draws down into the floor around drain stubs or drain

bowls or into the adjacent walls and give rise to damages due to moisture and/or fungal growth. An element according to the present invention will be suited for any type of building, but will particularly be suited for multi-storey buildings.

[0021] With a system according to the invention there is thus achieved an advantage known from the prior art cast-in-one shower booth basins, but may at the same time it may be used in a design in which the construction can be made, as it is known with common cast floor constructions in wet rooms and in shower booths. The only difference will be that the element is placed on the coarse concrete layer before casting the wearing layer. Polymeric concrete is advantageous as it may be finished and surface coated in a way similar to common concrete, if only treatment of the joints is performed. Thus it will be possible to provide the floor element with tiles, if desired.

[0022] According to a special embodiment, the floor element according to the present invention is peculiar in that around the floor surface there are provided several side walls integrated with the floor for forming a bowl-shaped basin for the formation of a shower booth basin.

[0023] By this new system it is ensured that the most loaded area with regard to the water in a bathroom, namely the shower booth that the bottom and a section up along the wall, preferably minimum 100 mm, are 100% sealed. This renders remaining precautions much easier. A corresponding height of the side walls will, however, also be used even if there is only one or two side walls for disposition against the walls in a room where the element is used as a part of the floor surface of the room.

[0024] According to a particular embodiment, the element is peculiar in that the drain stub/water trap is formed with a plastic stub which is surface coated on the part passing through the bottom wall and cast therein. Here it is noted that the surface treatment will primarily be provided in the form of grinding and coating with glue and sand which ensure adhering to the polymeric concrete. By such a construction, a particularly secure sealing of the drain is achieved, so that there is no risk of liquid seeping out in the area around the drain.

[0025] The plastic stub is normally to be pretreated over a distance extending more than 20 mm, as such dimension would be sufficient thickness on the bottom wall in a floor element, irrespective whether it is provided in the form of a floor plate or a shower booth basin. Usually there may be used a stub with any diameter. Particularly advantageous will be a standard diameter, e.g. 110 mm stub, which is cast on the bottom wall of the element.

[0026] It is noted that the drain stub/water trap does not have to be located in a drain depression, as the floor element can be made as a floor surface where there is a slope towards the drain stub/water trap, which then will constitute the drain area itself. Thus it will be possible to make the floor element as a traditional basin with a drain disposed at the centre of the basin, or make the floor element with the drain at a side wall or a corner of the floor surface of the floor element.

[0027] The side walls in the floor element may have any suitable height. It has appeared sufficient to use a height between 100 and 200 mm. Sufficient height is hereby ensured, where no seeping of water can occur in wet rooms. At the upper edge of the side walls, there may be established a traditional connection to walls disposed above in a room or side walls for a shower booth. Such walls may be provided as side walls that constitute a part of the building construction, or may be separate, independent side walls on a shower booth.

[0028] In order to make the element particularly applicable in connection with traditional construction, according to an advantageous embodiment it is peculiar in that it is adapted to be mounted on a coarse concrete layer for a surrounding floor, and that the floor surface has a thickness corresponding to the wearing layer of the surrounding floor in order to provide the same level for the floor surface of the finished floor inside the element and on the surrounding floor. It will thus be possible to establish floor surfaces in the element, e.g. in a shower booth and the surrounding floor in the wet room at the same level. Alternatively, it is possible to provide different levels between the floor surface of the element and the floor surface in the surrounding room.

[0029] According to a further embodiment, the element according to the invention is peculiar in that the internal surface of the element is surface treated, preferably by grinding or sandblasting, to ensure adhering of a surface covering which is bonded/glued permanently to the element. By such a design there is achieved a particularly secure bonding of the surface covering, e.g. tiles, wet room vinyl or similar that may be fastened to the element. Since the polymeric concrete in itself constitutes a cast-in-one, sealed structure, there will be no special requirements to the sealing of the surface covering. However, it will be advantageous to provide a secure attachment of such a surface covering to the element.

[0030] When a floor is made around a drain by using a floor element according to the invention, it will be preferred that a coarse concrete layer for a surrounding floor is cast, that the cast floor element is mounted upon the coarse concrete, and that a wearing layer is cast on the surrounding floor with a thickness so that the same level is provided on the surface of the finished floor inside the floor element and on the surrounding floor. By making the floor of the wet room in this way, it will in a particularly simple way be possible to establish the same level for the surface on the floor in the element and for a surrounding floor.

[0031] According to a further embodiment, the element according to the invention is peculiar in that at the bottom of the drain depression wall at the top side of the floor surface, drain holes are provided extending into a drain (the water trap) in order hereby to drain away any water seeping down into the tile bonding, so that it is ensured that this water is not trapped, thereby causing loose tiles and possibly sour odour of moisture.

Description of the Drawing

[0032] The invention will now be explained more closely in the following with reference to the accompanying schematic drawing, where:

- Fig. 1 shows a schematic view of an embodiment of a floor element according to the invention in the shape of a shower booth basin, as seen from above;
- Fig. 2 shows a partial section through a detail of the shower booth shown in Fig. 1;
- Fig. 3 shows a plan view of a further embodiment of a floor element according to the invention in the shape of a shower booth basin;
- Fig. 4 shows a first sectional view through the shower booth basin shown in Fig. 3,
- Fig. 5 shows a second sectional view through the shower booth basin shown in Fig. 3;
- Fig. 6 shows a plan view of a further embodiment of a floor element according to the invention in the shape of a plate-shaped floor element with a side wall; and
- Fig. 7 shows a partial, enlarged sectional view through the floor element shown in Fig. 6.

Detailed Description of the Invention

[0033] Firstly, it is to be noted that the accompanying drawing illustrates non-limiting embodiments of the invention. Other embodiments will be possible within the scope of the present invention as defined in the claims.

[0034] Figs. 1 and 2 show a shower booth basin 1. The shower booth basin has a floor surface 2 which is cast in one with side walls 3 for forming a bowl-shaped basin. At one side of the floor surface 2 there is provided a drain depression 4 in which there is provided a drain stub 5. The drain stub 5 will be a plastic stub which at the part 6 embedded in a bottom wall 7 is surface treated by grinding and application of a mixture of glue and sand. The drain stub may hereby adhere in a particularly secure way to the polymeric concrete used for making the shower booth basin 1.

[0035] As it particularly appears from Fig. 1, the drain depression 4 is provided as an elongated drain depression at one side of the shower booth basin and extending largely in parallel with a side wall 3. The drain stub 5 is provided at the centre of the drain depression, but may be provided at other positions. It is only to be ensured that there is a drop towards the drain stub 5 on the bottom 8 of the drain depression (Fig. 2). Furthermore, it is to be ensured that the floor surface 2 has a fall in direction of the arrow 9, so that water can run towards the drain depression 4. There are provided two rim areas 10 in the basin having a fall directed inwards against the central part and inwards against the drain depression 4.

[0036] As it particularly clearly appears from Fig. 2, the drain depression has a drain depression wall 11. The

wall 11 has an upper edge 12 provided at a height 13 above the surrounding part of the floor surface 2. Hereby it will be possible to apply a surface covering in the shower booth basin. The surface covering will have a thickness corresponding to the height 13.

[0037] As it appears from Fig. 2, a drain depression provided in the shower booth basin will have a bottom side 14 located at a level which is lower than the bottom side 15 of the bottom wall 16.

[0038] As alternative to the drain depression, a drain stub 5 will be provided directly in the bottom wall 16.

[0039] Figs. 3-5 show a second embodiment of a shower booth basin 1' having side walls 3 at the sides extending upwards so that they have an internal height of minimum 100 mm. The shower booth basin 1' has a drain depression 4 provided as an elongated drain depression or trench 4 at one side of the shower booth basin and extending largely in parallel with a side wall 3. There is a fall in the direction of the arrow 9. In a corner area 17, there is intended an entrance to the shower booth, and the side wall 18 may here be high or low or sloping to facilitate access, e.g. for wheelchair users.

[0040] In Fig. 4 appears a sectional view according to the arrow IV-IV in Fig. 3. It appears that the drain depression wall 11 around the drain depression 4 is provided with drain holes 19 at the bottom of the basin or the floor surface 2. A fall in the floor surface 2 is formed between the drain holes 19, ensuring that water is conducted to the drain holes and are not caught in tile bonding laid upon the sealed polymeric concrete. This would otherwise cause the tiles to loosen, and sour odour may arise from the still water in the tile bond.

[0041] In Fig. 5 appears a sectional view and an enlarged detail viewed according to the arrow V-V in Fig. 3. It appears that the drain depression 4 has a drain depression wall 11 along one side of a depression 20 in the bottom wall 16. The drain depression 4 may be provided with a stainless edge cast into the basin 1'. The height of the wall 11 corresponds to the height of tile bonding and tile, and there will be drain holes in the wall 11. An internal corner 21 for a grate 22 is formed in the wall 11 and in the side wall 4. At the bottom of the depression 20 there is embedded a drain stub 5.

[0042] Figs. 6-7 show a further embodiment of an element according to the invention in the form of a floor plate 23. The floor plate 23 has a side wall 3 and a largely rectangular drain 24 which is disposed at the centre of the floor surface 4. Alternatively, the drain 24 may be disposed close to the side wall 3. The floor plate 23 may have a side length between 400 and 7000 mm, preferably about 500 mm, and the drain 24 may have side length between 100 and 200 mm, preferably about 150 mm.

[0043] It appears that the sectional view in Fig. 7 is a drain stub 5 embedded in the bottom wall 16. The drain stub can be integrated with a drain bowl 25 which is also embedded in the bottom wall via a flange 26 in order to establish a secure sealing between the floor and the drain bowl/drain stub. A grate 22 is provided above the drain

bowl 25 as it rests on an internal corner in the drain depression wall 11 surrounding the drain 24.

5 Claims

1. A floor element, where there is provided at least one side wall (3) around a floor surface (2) integrated with the floor for abutting on a wall in a room in which the floor element is applied, where a drain is provided in the floor surface, and where a drain stub (5) is mounted in a drain area which in use is situated at the lowest part of the floor surface, **characterised in that** the floor element is cast in polymeric concrete, that the drain is made integral with the floor element, that the floor surface includes a drain depression (4) with a bottom (8) which is countersunk relative to the remaining part of the floor surface (2) which has an even fall (9) towards the drain depression (4), that a drain stub (5) and/or a water trap (25) is cast into the bottom (8) of the drain depression (4) and that the drain depression has an encircling wall (11), the upper edge (12) of which being disposed with spacing (13) above the surrounding part of the floor surface (2), in order that the floor surface may be covered with a surface covering, e.g. tiles, as the said spacing (13) corresponds to the thickness of the surface covering.
2. Floor element according to claim 1, **characterised in that** around the floor surface (2) there are provided several side walls (3) integrated with the floor for forming a bowl-shaped basin for the formation of a shower booth basin.
3. Floor element according to claim 1 or 2, **characterised in that** the drain stub/water trap (5/25) is formed with a plastic stub which is surface coated on the part passing through the floor and cast therein.
4. Floor element according to claim 3, **characterised in that** the plastic stub/water trap (5/25) is ground and coated with glue and sand in order to ensure adhesion to the polymeric concrete.
5. Floor element according to any preceding claim, **characterised in that** the at least one side wall (3) has a height between 100 and 200 mm.
6. Floor element according to any preceding claim, **characterised in that** it is adapted to be mounted on a coarse concrete layer for a surrounding floor, and that the floor surface has a thickness corresponding to the wearing layer of the surrounding floor in order to provide the same level for the floor surface of the finished floor inside the floor element and on the surrounding floor.

7. Floor element according to any preceding claim, **characterised in that** the internal surface (2) of the floor element is surface treated, preferably by grinding or sandblasting to ensure adhering of a surface covering which is bonded/glued permanently to the element. 5
8. Floor element according to any preceding claims, **characterised in that** at the bottom of the drain depression wall (11) at the top side of the floor surface (2) there are provided drain holes (19) extending into a drain in order hereby to drain away water seeping down into the tile bonding. 10
9. A method for making a floor element, where around a floor surface (2) there is provided at least one side wall (11) integrated with the floor for abutting on a wall in a room in which the floor element is applied, where a drain is provided in the floor surface, and where a drain stub (5) is mounted in a drain area which in use is situated at the lowest part of the floor surface, **characterised in that** the element is cast in polymeric concrete, that the drain is made integral with the floor element, that the floor surface (2) includes a drain depression (4) with a bottom (8) which is countersunk relative to the remaining part of the floor surface (2) which has an even fall (9) towards the drain depression (4), that a drain stub (5) and/or a water trap (25) is cast into the bottom (8) of the drain depression, and that the drain depression (4) has an encircling wall (11), the upper edge (12) of which being disposed with spacing (13) above the surrounding part of the floor surface (2), in order that the floor surface may be covered with a surface covering, e.g. tiles, as the said spacing corresponds to the thickness of the surface covering. 15
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10. Method according to claim 9, **characterised in that** a coarse concrete layer for a surrounding floor is cast, that the cast floor element is mounted upon the coarse concrete, and that a wearing layer is cast on the surrounding floor with a thickness so that the same level is provided on the surface of the finished floor inside the basin and on the surrounding floor. 40
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Patentansprüche

1. Bodenelement, bei dem mindestens eine mit dem Boden verbundene Seitenwand (3) um eine Bodenoberfläche (2) vorgesehen ist, um an einer Wand in einem Raum, in dem das Bodenelement aufgebracht wird, anzustoßen, wobei ein Abfluss in der Bodenoberfläche vorgesehen ist, und wobei ein Abflusstutzen (5) in einem Abflussbereich montiert ist, der im Einsatz an dem untersten Teil der Bodenoberfläche liegt, **dadurch gekennzeichnet, dass** das Bodenelement in Polymerbeton gegossen ist, dass 50
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der Abfluss einstückig mit dem Bodenelement hergestellt ist, dass die Bodenoberfläche eine Abflussvertiefung (4) mit einem Boden (8) umfasst, der in Bezug auf den restlichen Teil der Bodenoberfläche (2), der ein gleichmäßiges Gefälle (9) in Richtung zur Abflussvertiefung (4) aufweist, versenkt ist, dass ein Abflusstutzen (5) und/oder ein Wasserabscheider (25) in den Boden (8) der Abflussvertiefung (4) eingegossen ist, und dass die Abflussvertiefung eine umschließende Wand (11) aufweist, deren obere Kante (12) mit einem Abstand (13) über dem umgebenden Teil der Bodenoberfläche (2) angeordnet ist, damit die Bodenoberfläche mit einem Oberflächenbelag, z. B. Fliesen, bedeckt werden kann, da der Abstand (13) der Dicke des Oberflächenbelags entspricht.

2. Bodenelement nach Anspruch 1, **dadurch gekennzeichnet, dass** um die Bodenoberfläche (2) mehrere mit dem Boden verbundene Seitenwände (3) vorgesehen sind, um ein schalenförmiges Becken für die Bildung eines Duschkabinenbeckens auszubilden.
3. Bodenelement nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** der Abflusstutzen/Wasserabscheider (5/25) mit einem Kunststoffstutzen ausgebildet ist, der auf dem Teil, der durch den Boden verläuft und darin eingegossen ist, oberflächenbeschichtet ist. 25
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4. Bodenelement nach Anspruch 3, **dadurch gekennzeichnet, dass** der Kunststoffstutzen/Wasserabscheider (5/25) abgeschliffen und mit Klebstoff und Sand beschichtet ist, um eine Haftung am Polymerbeton sicherzustellen. 35
5. Bodenelement nach einem beliebigen vorstehenden Anspruch, **dadurch gekennzeichnet, dass** die mindestens eine Seitenwand (3) eine Höhe zwischen 100 und 200 mm aufweist.
6. Bodenelement nach einem beliebigen vorstehenden Anspruch, **dadurch gekennzeichnet, dass** es ausgelegt ist, um auf einer groben Betonschicht für einen umgebenden Boden befestigt zu werden, und dass die Bodenoberfläche eine Dicke aufweist, die der Nuttschicht des umgebenden Bodens entspricht, um das gleiche Niveau für die Bodenoberfläche des fertiggestellten Bodens innerhalb des Bodenelements und auf dem umgebenden Boden bereitzustellen.
7. Bodenelement nach einem beliebigen vorstehenden Anspruch, **dadurch gekennzeichnet, dass** die Innenoberfläche (2) des Bodenelements oberflächenbehandelt ist, vorzugsweise durch Schleifen oder Sandstrahlen, um ein Anhaften eines Oberflächen-

belags, der dauerhaft mit dem Element verbunden/verklebt ist, sicherzustellen.

8. Bodenelement nach einem beliebigen vorstehenden Anspruch, **dadurch gekennzeichnet, dass** am Boden der Abflussvertiefungswand (11) an der Oberseite der Bodenoberfläche (2) Abflusslöcher (19) vorgesehen sind, die sich in einen Abfluss erstrecken, damit Wasser, das in die Fliesenverklebung heruntertropft, abfließt. 5 10
9. Verfahren zum Herstellen eines Bodenelements, bei dem um eine Bodenoberfläche (2) mindestens eine mit dem Boden verbundene Seitenwand (11) vorgesehen ist, um an einer Wand in einem Raum, in dem das Bodenelement aufgebracht wird, anzustoßen, wobei ein Abfluss in der Bodenoberfläche vorgesehen ist, und wobei ein Abflusstutzen (5) in einem Abflussbereich montiert ist, der im Einsatz an dem untersten Teil der Bodenoberfläche liegt, **dadurch gekennzeichnet, dass** das Element in Polymerbeton gegossen ist, dass der Abfluss einstückig mit dem Bodenelement hergestellt ist, dass die Bodenoberfläche (2) eine Abflussvertiefung (4) mit einem Boden (8) umfasst, der in Bezug auf den restlichen Teil der Bodenoberfläche (2), der ein gleichmäßiges Gefälle (9) in Richtung zur Abflussvertiefung (4) aufweist, versenkt ist, dass ein Abflusstutzen (5) und/oder ein Wasserabscheider (25) in den Boden (8) der Abflussvertiefung (4) eingegossen ist, und dass die Abflussvertiefung (4) eine umschließende Wand (11) aufweist, deren obere Kante (12) mit einem Abstand (13) über dem umgebenden Teil der Bodenoberfläche (2) angeordnet ist, damit die Bodenoberfläche mit einem Oberflächenbelag, z. B. Fliesen, bedeckt werden kann, da der Abstand der Dicke des Oberflächenbelags entspricht. 15 20 25 30
10. Verfahren nach Anspruch 9, **dadurch gekennzeichnet, dass** eine grobe Betonschicht für einen umgebenden Boden gegossen wird, dass das gegossene Bodenelement auf dem groben Beton befestigt wird, und dass eine Nuttschicht auf den umgebenden Boden mit einer Dicke gegossen wird, so dass das gleiche Niveau auf der Oberfläche des fertiggestellten Bodens innerhalb des Beckens und auf dem umgebenden Boden bereitgestellt wird. 35 40 45

Revendications 50

1. Élément de plancher, où il est prévu au moins une paroi latérale (3) autour d'une surface de plancher (2) intégrée dans le plancher pour abuter sur une paroi dans une pièce dans laquelle l'élément de plancher est appliqué, où une évacuation d'eau est prévue dans la surface de plancher, et une tubulure d'évacuation (5) est montée dans une zone de drain 55

qui lors de l'utilisation est située à la partie la plus basse de la surface de plancher, **caractérisé en ce que** l'élément de plancher est coulé en béton polymère, que l'évacuation d'eau est rendue solidaire de l'élément de plancher, que la surface de plancher comprend une cuvette de l'évacuation d'eau (4) avec un fond (8) qui est fraisé par rapport à la partie restante de la surface de plancher (2) qui présente une descente régulière (9) vers la cuvette de l'évacuation d'eau (4), qu'une tubulure d'évacuation (5) et/ou un siphon (25) est coulé dans le fond (8) de cuvette de l'évacuation d'eau (4) et que la cuvette de l'évacuation d'eau présente une enceinte (11), dont le bord supérieur (12) étant disposé avec un espacement (13) au-dessus de la partie entourant la surface de plancher (2), afin que la surface de plancher puisse être recouverte d'un revêtement de surface, par exemple des dalles, comme ledit espacement (13) correspond à l'épaisseur du revêtement de surface.

2. Élément de plancher selon la revendication 1, **caractérisé en ce qu'**autour de la surface de plancher (2) plusieurs parois latérales sont prévues (3) intégrées dans le plancher pour former une cuvette en forme de coupe pour la formation d'une base de cabine de douche.
3. Élément de plancher selon la revendication 1 ou 2, **caractérisé en ce que** la tubulure d'évacuation /le siphon (5/25) est formé avec une tubulure en matière plastique qui est revêtue de surface sur la partie traversant le plancher et coulée là-dedans.
4. Élément de plancher selon la revendication 3, **caractérisé en ce que** la tubulure en plastique /le siphon (5/25) est meulé et enduit de colle et de sable afin d'assurer l'adhérence au béton polymère.
5. Élément de plancher selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la au moins une paroi latérale (3) a une hauteur comprise entre 100 et 200 mm.
6. Élément de plancher selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'**il est apte à être montée sur une couche de béton grossière pour un plancher environnant, et que la surface de plancher présente une épaisseur correspondant à la couche d'usure du sol environnant afin de fournir le même niveau de la surface de plancher du plancher fini à l'intérieur de l'élément de plancher et sur le plancher environnant.
7. Élément de plancher selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la surface interne (2) de l'élément de plancher est traitée de surface, de préférence par broyage ou par sablage pour assurer l'adhérence d'un revêtement

de surface qui est attaché/collé de manière permanente à l'élément.

8. Élément de plancher selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'**au fond de l'enceinte de la cuvette de l'évacuation d'eau (11) sur le côté supérieur de la surface de plancher (2) des trous de drainage (19) sont disposés s'étendant dans une évacuation d'eau pour ainsi drainer l'eau de suinter dans le collage des dalles. 5 10

9. Procédé de fabrication d'un élément de plancher, où il est prévu au moins une paroi latérale (11) autour d'une surface de plancher (2) intégrée dans le plancher pour abuter sur une paroi dans une pièce dans laquelle l'élément de plancher est appliqué, où une évacuation d'eau est prévue dans la surface de plancher, et une tubulure d'évacuation (5) est montée dans une zone d'évacuation d'eau qui lors de l'utilisation est située à la partie la plus basse de la surface de plancher, **caractérisé en ce que** l'élément est coulé dans le béton polymère, que l'évacuation d'eau est rendue solidaire de l'élément de plancher, que la surface de plancher (2) comprend une cuvette de l'évacuation d'eau (4) avec un fond (8) qui est fraisé par rapport à la partie restante de la surface de plancher (2) qui a une descente régulière (9) vers la cuvette de l'évacuation d'eau (4), qu'une tubulure d'évacuation (5) et/ou un siphon (25) est coulé dans le fond (8) de la cuvette de l'évacuation, et que la cuvette de l'évacuation (4) présente une enceinte (11), dont le bord supérieur (12) étant disposé avec un espacement (13) au-dessus de la partie entourant la surface de plancher (2), afin que la surface de plancher puisse être recouvert d'un revêtement de surface, par exemple des dalles, comme ledit espacement correspond à l'épaisseur du revêtement de surface. 15 20 25 30 35

10. Procédé selon la revendication 9, **caractérisé en ce qu'**une couche de béton grossière pour un plancher environnant est coulé, que l'élément de plancher coulé est monté sur le béton grossière, et qu'une couche d'usure est coulée sur le plancher environnant avec une épaisseur telle que le même niveau est disposé sur la surface du plancher fini à l'intérieur de la cuvette et sur le plancher environnant. 40 45

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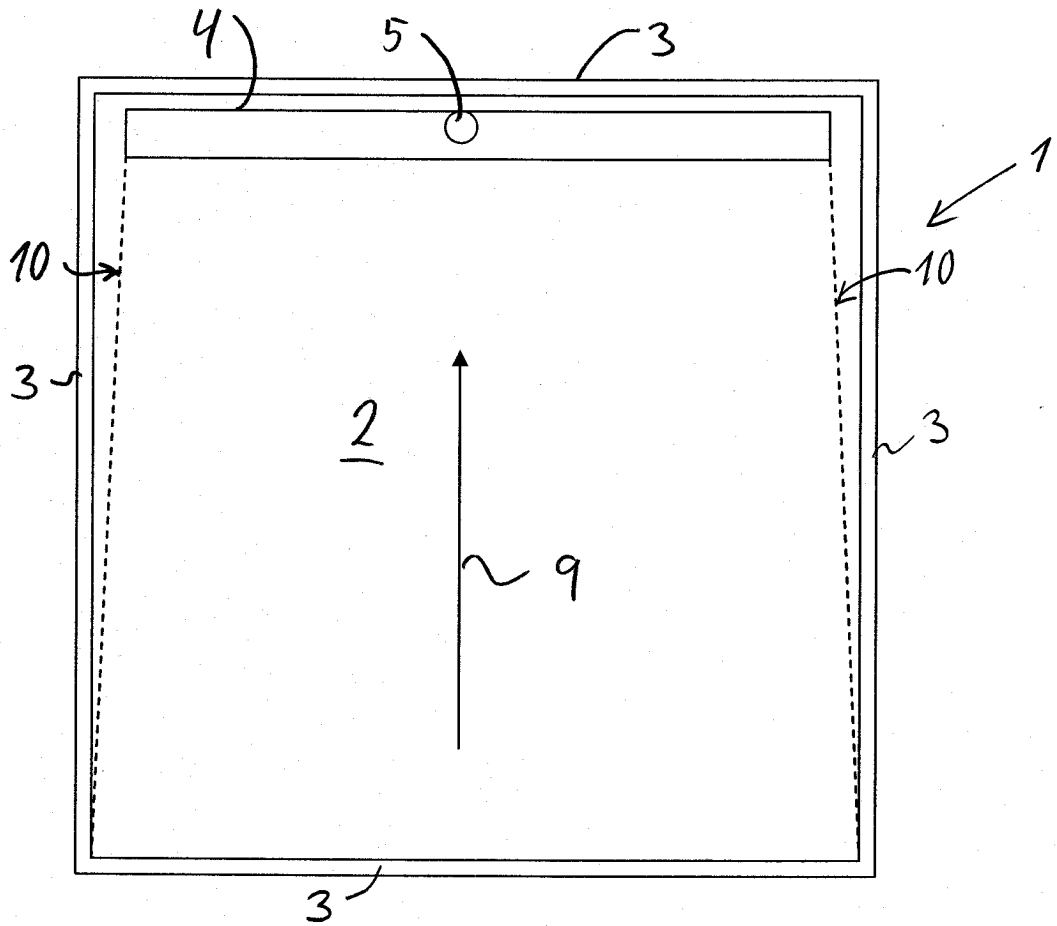


Fig. 1

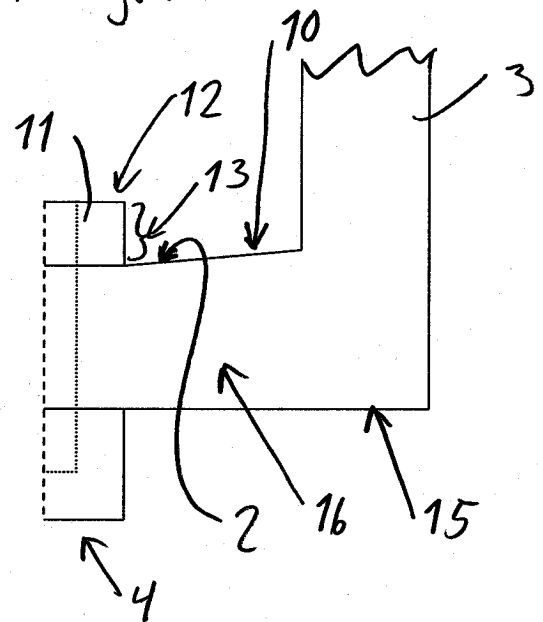
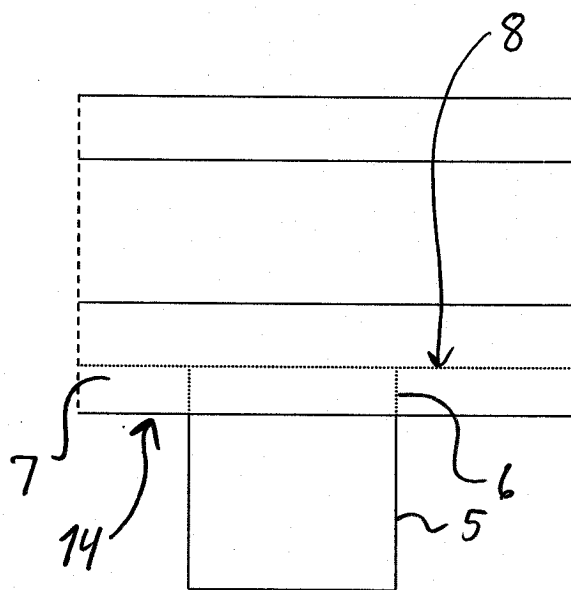


Fig. 2

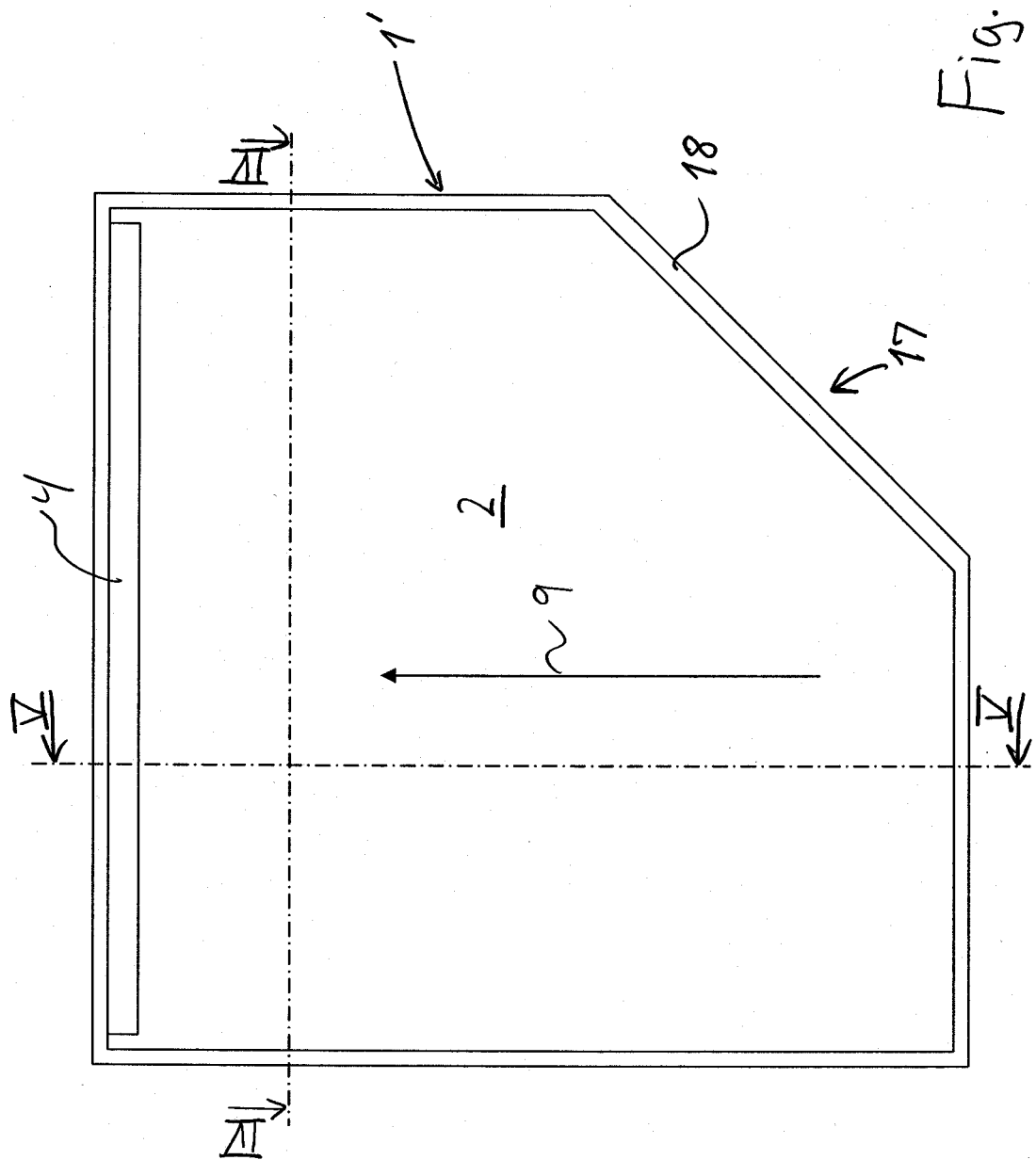


Fig. 3

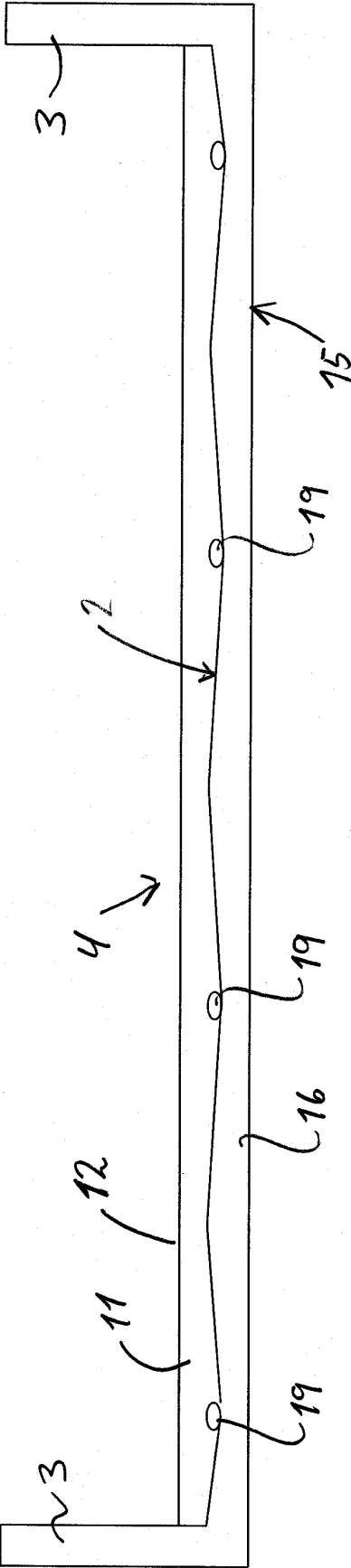


Fig. 4

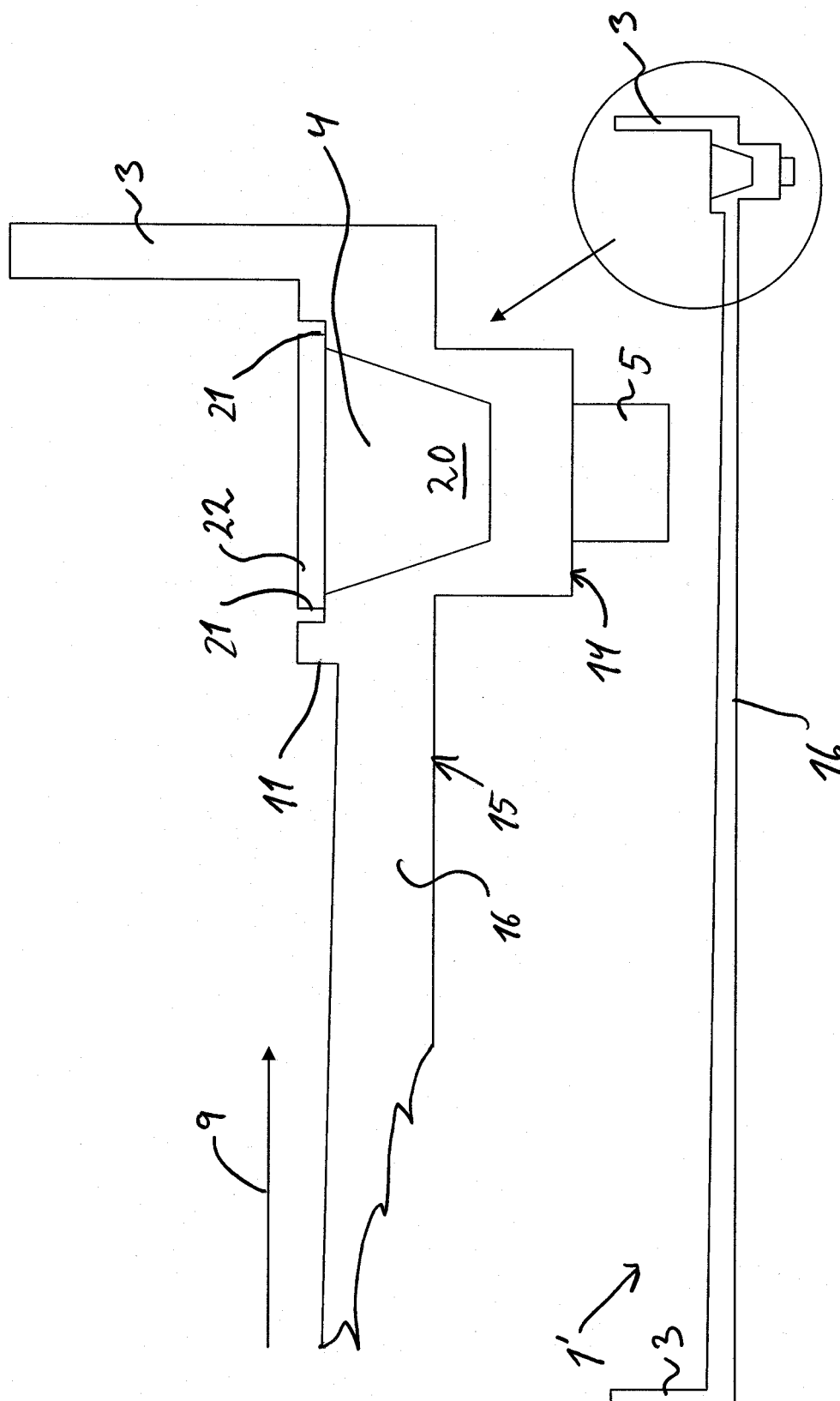


Fig. 5

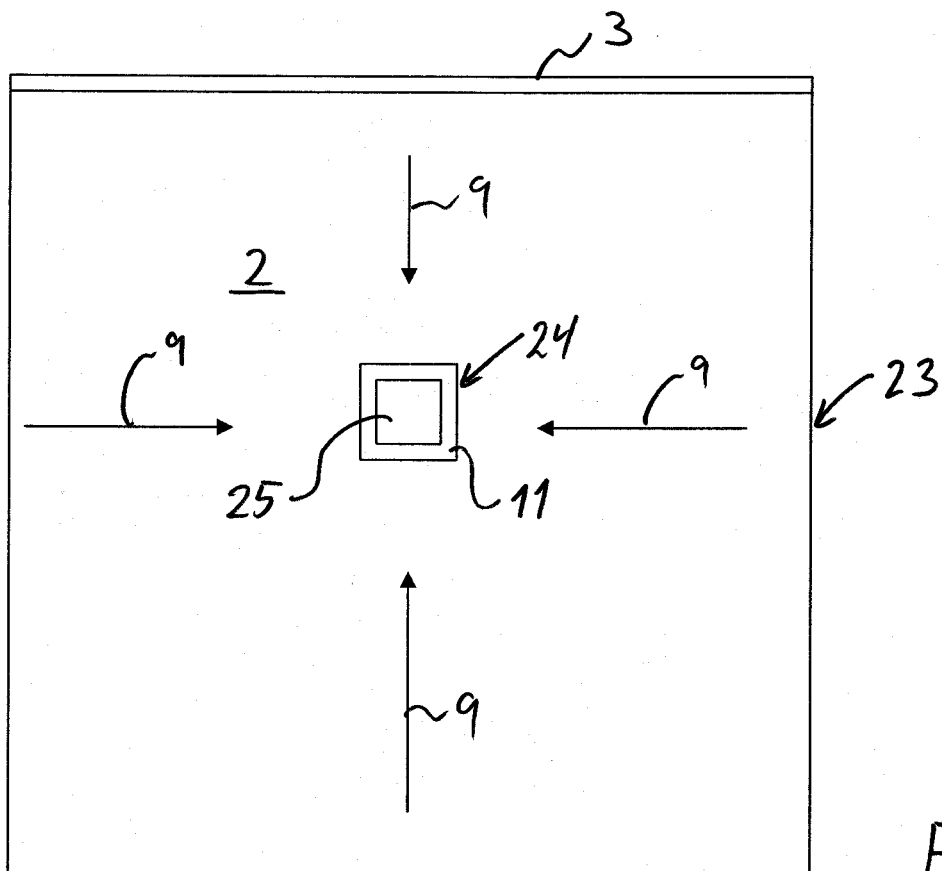


Fig. 6

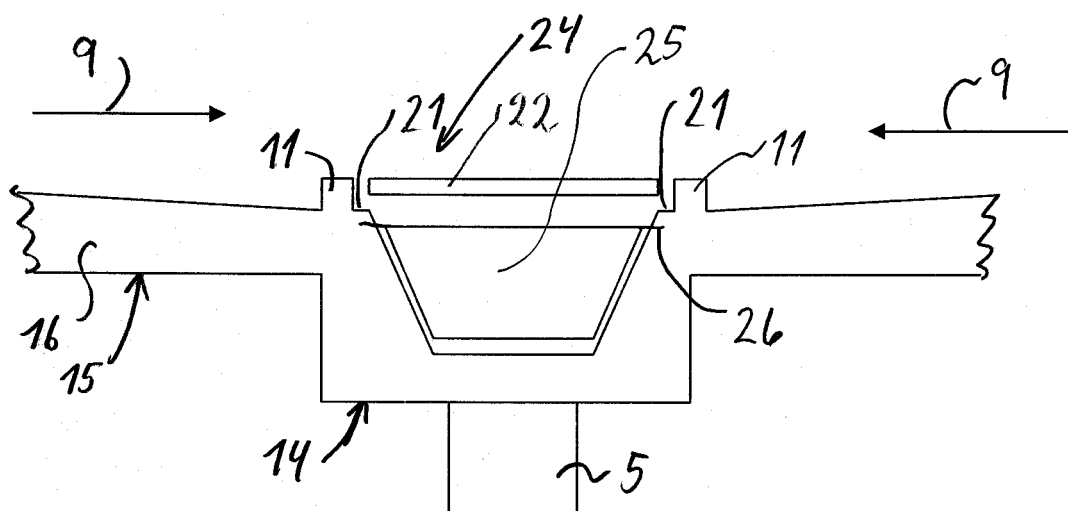


Fig. 7

REFERENCES CITED IN THE DESCRIPTION

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