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(54) **SINK MOUNTED IN A HOLE OF A TOP**

SPÜLBECKEN IN EINEM LOCH EINER ARBEITSFLÄCHE MONTIERT

ÉVIER MONTÉ DANS UN TROU D'UN PLAN DE TRAVAIL

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Description

[0001] The present patent concerns a sink mounted in a hole of a top according to the preamble of claim 1. Sinks are known that are made with metal plate or ceramic or other materials, for example acrylic/synthetic materials, shaped with one or more bowls with edge, applied and fixed to a special hole made in the top of the kitchen or bathroom.

[0002] The top of the kitchen or bathroom can be made of a natural material, typically marble, or a composite material comprising a core made of wood, hardboard, chipboard or similar materials, to which a layer of melamine or phenolic laminate material is applied, the latter material being resistant to heat and the chemical products used for house cleaning.

[0003] The known sinks are provided with various holes and couplings:

- at least one lower hole intended to serve as a drain;
- at least one overflow hole;
- a possible hole for the tap.

[0004] The sinks used currently and constituted as described above pose several drawbacks.

[0005] The sinks used at present are in a metallic colour, or in some cases they are painted in a single colour, and are rather noticeable so that they stand out from the top to which they are applied.

[0006] Current sinks are provided with a drain hole on the bottom, which is unpleasant to the sight.

[0007] DE10235367 discloses a basin having a side edge region, a clean water reception region, provided by a flat plate, and at least one drainage opening which is covered by the clean water reception region, with a narrow drainage gap between the latter and the side edge region and a drainage region below the flat plate.

[0008] Other examples of prior art solutions can be found in documents DE202010007075U1, EP2378012A2, US4336620A and GB2397520A.

[0009] The subject of the present patent is a new sink having the features of claim 1.

[0010] Further preferred embodiments are defined by the features of dependent claims 2-5.

[0011] It is one object of the present invention to cover the drain hole so that it cannot be seen.

[0012] It is another object of the invention to provide a new sink whose colour or colour pattern is coordinated with the colour of the top to which it is applied.

[0013] It is another object of the present invention to provide a new sink without any step or projecting part between the top and the inner walls of the sink itself.

[0014] These and other direct and complementary objects are achieved by the new sink comprising a bowl-shaped element that is integral with the top, an inner covering for the side walls that is integral with the top and a removable bottom.

[0015] The bowl-shaped element is generally made of

a stainless steel plate, or ceramic or other materials, for example acrylic/synthetic materials, and the upper edges of its side walls are bent towards the outside so as to form a fixing edge that can be fixed to the top.

[0016] In particular, said fixing edge is flat, develops along the entire perimeter of the upper edges of the side walls and is suited to be fixed to the underside of the top, at the level of the hole made in said top.

[0017] On the lower surface or bottom of said bowl-shaped element there is the water drain hole.

[0018] The inner covering of the side walls is constituted by shaped panels, in a suitable size, suited to be applied to the edge of the hole made in the top and to the inner walls of the bowl-shaped element.

[0019] In particular, said inner covering panels are constituted by panels covered with a layer of the same material used for the top, like phenolic laminate, HPL laminate, single-colour laminate, here below referred to as laminate.

[0020] The height of these inner covering panels substantially corresponds to the depth of said bowl, meaning the distance from the surface of the bowl's bottom to the top to which the new sink is applied.

[0021] The upper edge of the inner covering panels is radiused with the edge of the hole made in the top, so as to ensure continuity between the layer of laminate material of the top where the sink is integrated and the layer of laminate material used to make the covering panels.

[0022] The lower edge of the inner covering panels is joined to the surface of the bowl's bottom by means of a sealing glue suited to prevent any infiltration of liquids or particles between the inner covering panels and the side walls or the bottom of the bowl itself.

[0023] According to the preferred solution:

- the upper edge of said covering panels is at the level of the upper surface of the core of the top,
- the layer of laminate material of the top projects from the core of the top and covers also the upper edge of said covering panels,
- the edge of the layer of laminate material of the covering panels and the edge of the layer of laminate material of the top are adherent to each other, radiused with each other and joined permanently with glues, adhesives or other means suited to prevent their separation and any infiltrations between the covering panels and the top.

[0024] The removable bottom is constituted by a panel made with a waterproof material, suited to be positioned on the bottom of the bowl and whose size is slightly smaller than the space between the panels of said inner covering.

[0025] In particular, the size of said removable bottom is such that, when it is positioned on the bottom of the bowl, between its side edges and the surface of the inner covering panels there is a space of some millimetres,

indicatively measuring from 1 to 10 millimetres.

[0026] According to the invention, the edges of said removable bottom can be provided with projections or other elements intended to prevent one or more edges of said removable bottom from completely or mostly adhering to the adjacent surface of the inner covering.

[0027] In this way, the water or other liquids that are poured or that flow therein can flow in the spaces included between the edges of the removable bottom and the inner vertical surfaces of the inner covering.

[0028] On the underside of said removable bottom there are projections or feet suited to maintain the underside of the removable bottom raised from the surface of the bowl's bottom, so as to allow the fluids to flow towards the drain hole of said bowl. In particular, the projections or feet can preferably be higher in proximity to an edge, or have increasing height towards an edge, so that the removable bottom, once it has been laid on the bottom of the bowl, is slightly inclined.

[0029] Said removable bottom can be made with the same materials used for the top and the inner covering panels and be provided with the layer of laminate material on all the exposed surfaces.

[0030] The upper visible surface of said removable bottom should preferably reproduce the same finishes, decorations or patterns of the inner covering and the top.

[0031] The characteristics of the new sink with hidden drain and in a colour matching that of the top to which it is applied are highlighted in greater detail in the following description, with reference to the attached drawings that are enclosed by way of nonlimiting example.

[0032] Figure 1 shows a vertical sectional view of the new sink, comprising:

- a bowl-shaped element (1),
- an inner covering (2) of the side walls,
- a removable bottom (3).

[0033] Figures 2 and 3 respectively show, in detail, a vertical sectional view and a horizontal sectional view of the new sink installed and mounted on a top (P).

[0034] The bowl-shaped element (1) is constituted by a stainless steel plate shaped as a bowl (1) and having the upper edges (1.2a) of its side walls (1.2) bent towards the outside in such a way as to form a fixing edge suited to be fixed to the top (P).

[0035] In the lower surface or bottom (1.3) of said bowl-shaped element (1) there is the water drain hole (1.4).

[0036] The inner covering (2) of the side walls (1.2) is constituted by shaped panels (2.1) in a suitable size and suited to be applied to the inner walls (1.2) of the bowl-shaped element (1).

[0037] Said panels (2.1) of the inner covering (2) are made using panels (2.2) covered with a layer of the same laminate material (P.2) used for the top (P).

[0038] Said inner covering (2) extends between the surface of the bottom (1.3) of the bowl-shaped element (1) and the top (P) to which the new sink is applied.

[0039] The upper edge (2.1a) of the panels (2.1) is radiused (R) with the edge of the hole provided in the top (P).

[0040] The lower edge (2.1b) of the panels (2.1) of the inner covering (2) are joined to the surface of the bottom (1.3) of the bowl-shaped element (1.1) by means of a sealing glue (C).

[0041] In this example of embodiment, the upper part of the inner covering is structured as follows:

- the upper edge (2.1a) of said panels (2.1) of the covering (2) is at the same level as the upper surface of the core (P.1) of the top (P),
- the layer of laminate material (P.2) of the top (P) projects from the core (P.1) of the top (P) and covers also the upper edge (2.1a) of said panels (2.1) of the covering (2),
- the edge of the layer of laminate material (2.2) of the panels (2.1) of the covering (2) and the edge of the layer of laminate material (P.2) of the top (P) are connected (R) together and joined permanently.

[0042] The upper edge (2.1a) of the panels (2.1) of the inner covering (2) is joined to the edge of the top (P) and of the bowl (1) through the interposition of a sealing glue (C).

[0043] The removable bottom (3) is constituted by a panel made of a waterproof material, covered with a laminate material suited to be positioned on the bottom (1.3) of the bowl-shaped element (1) and whose size is slightly smaller than the space between the panels (2.1) of said inner covering (2).

[0044] On the edges (3.1) of said removable bottom (3) there are projections (3.1a) that are such as to prevent the edges (3.1) of said removable bottom (3) from adhering to the adjacent surface of the inner covering (2).

[0045] On the underside of said removable bottom (3) there are projections or feet (3.2) suited to maintain the underside of the removable bottom (3) raised from the surface of the bottom (1.3) of the bowl-shaped element (1) in such a way as to allow the liquids to flow towards the drain hole (1.4) of said bowl (1).

[0046] Said projections or feet (3.2) are higher in proximity to an edge (3.1), so that the removable bottom (3), once it has been laid on the bottom (1.3) of the bowl (1), is inclined.

[0047] According to this example of embodiment, the edge (3.1b) of the removable bottom (3) that is most raised from the bottom (1.3) of the bowl (1) is tapered in its lower part, so as to make it easier to incline and lift the removable bottom (3) itself: it is sufficient to press said removable bottom (3) at the level of said tapered edge (3.1b) in order to cause the opposite edge (3.1) to be raised and allow the user to seize and remove the removable bottom (3).

[0048] The new sink offers considerable advantages.

[0049] The new sink has a colour or colour pattern that matches that of the top to which it is applied and conse-

quently is less noticeable than the known sinks.

[0050] The new sink does not have steps or projecting edges between the top and the bowl. The drain hole of the new sink is not visible, which improves the aesthetical appearance of the entire sink.

[0051] Therefore, with reference to the above description and the attached drawings, the following claims are expressed.

Claims

1. Sink mounted in a hole of a top (P), comprising:

- an element made of metal or ceramic or synthetic acrylic, shaped as a bowl (1) whose bottom (1.3) is provided with a hole (1.4) for draining water and having side walls (1.2) with upper edges (1.2a) which are bent towards the outside in such a way as to form a fixing edge suitable to be fixed to an edge of the hole of the top (P),
- an inner covering (2) for the side walls (1.2) of said bowl-shaped element (1), constituted by shaped panels (2.1) extending from the surface of the bottom (1.3) of said bowl (1) to the top (P) to which the bowl-shaped element (1) itself may be applied,

and wherein said shaped panels (2.1) are made using panels covered with a layer of the same laminate material (2.2) used for the top (P), and wherein upper edges (2.1a) of the panels (2.1) are radiused at the level of the edge of the hole made in the top (P), and wherein a removable bottom (3) slightly smaller than the space between the panels (2.1) of said inner covering (2) is positioned on the bottom (1.3) of the bowl (1) and is provided on its underside with projections or feet (3.2) suited to maintain the underside of the removable bottom (3) raised from the surface of the bottom (1.3) of the bowl (1).

2. Built-in sink mounted in the hole of the top according to claim 1, **characterized in that** lower edges (2.1b) and upper edges (2.1a) of said panels (2.1) of said inner covering (2) are respectively joined to the surface of the bottom (1.3) of the bowl (1) and to the top (P) by means of a sealing glue (C).
3. Built-in sink mounted in the hole of the top according to the preceding claims, **characterized in that** the edges (3.1) of said removable bottom (3) are provided with projections (3.1a) or shaped portions that are such as to prevent an edge (3.1) of said removable bottom (3) from adhering completely to the adjacent surface of the inner covering (2).
4. Built-in sink mounted in the hole of the top according to the preceding claims, **characterized in that** said

lower projections or feet (3.2) of said removable bottom (3) are higher in proximity to an edge (3.1) or their height increases towards an edge (3.1), so that the removable bottom (3), once it has been laid on the bottom (1.3) of the bowl (1), is inclined.

5. Built-in sink mounted in the hole of the top according to the preceding claims, **characterized in that** said removable bottom (3) is provided with at least one edge (3.1) that is tapered at the level of its lower part, in such a way as to make it easier to incline and lift the removable bottom (3) itself.

15 Patentansprüche

1. Spülbecken, in einem Loch in einer Arbeitsfläche (P) montiert; Folgendes umfassend:

- ein Element aus Metall oder Keramik oder synthetischem Acryl, geformt als Schüssel (1), deren Boden (1.3) mit einem Loch (1.4) zum Ablassen von Wasser versehen ist und die Seitenwände (1.2) mit oberen Kanten (1.2a) hat, die so nach außen gebogen sind, dass sie eine Befestigungskante bilden, welche geeignet ist, an einem Rand des Lochs in der Arbeitsfläche (P) befestigt zu werden,
- eine Innenabdeckung (2) für die Seitenwände (1.2) des schüsselförmigen Elements (1), bestehend aus geformten Platten (2.1), die sich von der Oberfläche des Bodens (1.3) der Schüssel (1) bis zur Arbeitsfläche (P) erstrecken, an der das schüsselförmige Element (1) selbst angebracht werden kann,

und wobei die geformten Platten (2.1) hergestellt werden unter Verwendung von Platten, die mit einer Schicht desselben Laminatmaterials (2.2) bedeckt sind, das für die Arbeitsfläche (P) verwendet wird, und wobei Oberkanten (2.1a) der Platten (2.1) auf dem Niveau der Kante des Lochs in der Arbeitsfläche (P) gerundet sind, und wobei ein herausnehmbarer Boden (3), etwas kleiner als der Raum zwischen den Platten (2.1) der Innenabdeckung (2), auf dem Boden (1.3) der Schüssel (1) positioniert und an seiner Unterseite mit Vorsprüngen oder Füßen (3.2) ausgestattet ist, die geeignet sind, die Unterseite des herausnehmbaren Bodens (3) von der Oberfläche des Bodens (1.3) der Schüssel (1) angehoben zu halten.

2. Eingebautes Spülbecken, in dem Loch in der Arbeitsfläche montiert, gemäß Anspruch 1, **dadurch gekennzeichnet, dass** die Unterkanten (2.1b) und Oberkanten (2.1a) der Platten (2.1) der Innenabdeckung (2) mit der Oberfläche des Bodens (1.3) der

Schüssel (1) beziehungsweise mit der Arbeitsfläche (P) durch einen Abdichtungskleber (C) verbunden sind.

3. Eingebautes Spülbecken, in dem Loch in der Arbeitsfläche montiert, gemäß den obigen Ansprüchen, **dadurch gekennzeichnet, dass** die Kanten (3.1) des herausnehmbaren Bodens (3) mit Vorsprüngen (3.1a) oder geformten Abschnitten versehen sind, die derart sind, dass sie eine Kante (3.1) des herausnehmbaren Bodens (3) daran hindern, vollständig an der benachbarten Oberfläche der Innenabdeckung (2) zu haften. 5
4. Eingebautes Spülbecken, in dem Loch in der Arbeitsfläche montiert, gemäß den obigen Ansprüchen, **dadurch gekennzeichnet, dass** die unteren Vorsprünge oder Füße (3.2) des herausnehmbaren Bodens (3) höher in Proximität zu einer Kante (3.1) sind oder ihre Höhe zu einer Kante (3.1) hin zunimmt, so dass der herausnehmbare Boden (3) schräg ist, sobald er auf den Boden (1.3) der Schüssel (1) gelegt wurde. 10
5. Eingebautes Spülbecken, in dem Loch in der Arbeitsfläche montiert, gemäß den obigen Ansprüchen, **dadurch gekennzeichnet, dass** der herausnehmbare Boden (3) mit mindestens einer Kante (3.1) versehen ist, die so auf der Ebene ihres unteren Teils spitz zuläuft, dass das Neigen und Anheben des herausnehmbaren Bodens (3) selbst erleichtert wird. 15

Revendications

1. Évier monté dans un trou d'un plan de travail (P), comprenant : 20
 - un élément constitué de métal ou de céramique ou d'acrylique synthétique, ayant la forme d'un bol (1) dont le fond (1.3) est pourvu d'un trou (1.4) pour évacuer l'eau et ayant des parois latérales (1.2) avec des bords supérieurs (1.2a) qui sont courbés vers l'extérieur de manière à former un bord de fixation approprié pour être fixé à un bord du trou du plan de travail (P), 25
 - un revêtement intérieur (2) pour les parois latérales (1.2) dudit élément en forme de bol (1), constitué de panneaux mis en forme (2.1) qui s'étendent de la surface du fond (1.3) dudit bol (1) au plan de travail (P) auquel l'élément en forme de bol (1) peut être appliqué, 30

et dans lequel lesdits panneaux mis en forme (2.1) sont fabriqués en utilisant des panneaux couverts d'une couche du même matériau stratifié (2.2) que celui utilisé pour le plan de travail (P), et dans lequel 35

les bords supérieurs (2.1a) des panneaux (2.1) sont arrondis au niveau du bord du trou formé dans le plan de travail (P),

et dans lequel un fond amovible (3) légèrement plus petit que l'espace entre les panneaux (2.1) dudit revêtement intérieur (2) est placé sur le fond (1.3) du bol (1) et est pourvu sur sa face inférieure de protubérances ou de pieds (3.2) appropriés pour maintenir la face inférieure du fond amovible (3) surélevée par rapport à la surface du fond (1.3) du bol (1). 40

2. Évier intégré monté dans le trou d'un plan de travail selon la revendication 1, **caractérisé en ce que** les bords inférieurs (2.1b) et les bords supérieurs (2.1a) desdits panneaux (2.1) dudit revêtement intérieur (2) sont liés respectivement à la surface du fond (1.3) du bol (1) et au plan de travail (P) au moyen d'une colle d'étanchéité (C). 45
3. Évier intégré monté dans le trou d'un plan de travail selon les revendications précédentes, **caractérisé en ce que** les bords (3.1) dudit fond amovible (3) sont pourvus de protubérances (3.1a) ou de parties mises en forme qui sont de nature à empêcher un bord (3.1) dudit fond amovible (3) d'adhérer complètement à la surface adjacente du revêtement intérieur (2). 50
4. Évier intégré monté dans le trou d'un plan de travail selon les revendications précédentes, **caractérisé en ce que** lesdites protubérances inférieures ou lesdits pieds (3.2) dudit fond amovible (3) sont plus haut(e)s à proximité d'un bord (3.1) ou leur hauteur augmente vers un bord (3.1), de sorte que le fond amovible (3), quand il est posé sur le fond (1.3) du bol (1), est incliné. 55
5. Évier intégré monté dans le trou d'un plan de travail selon les revendications précédentes, **caractérisé en ce que** ledit fond amovible (3) est pourvu d'au moins un bord (3.1) qui est biseauté au niveau de sa partie inférieure, de manière à faciliter l'inclinaison et le levage du fond amovible (3) lui-même. 60

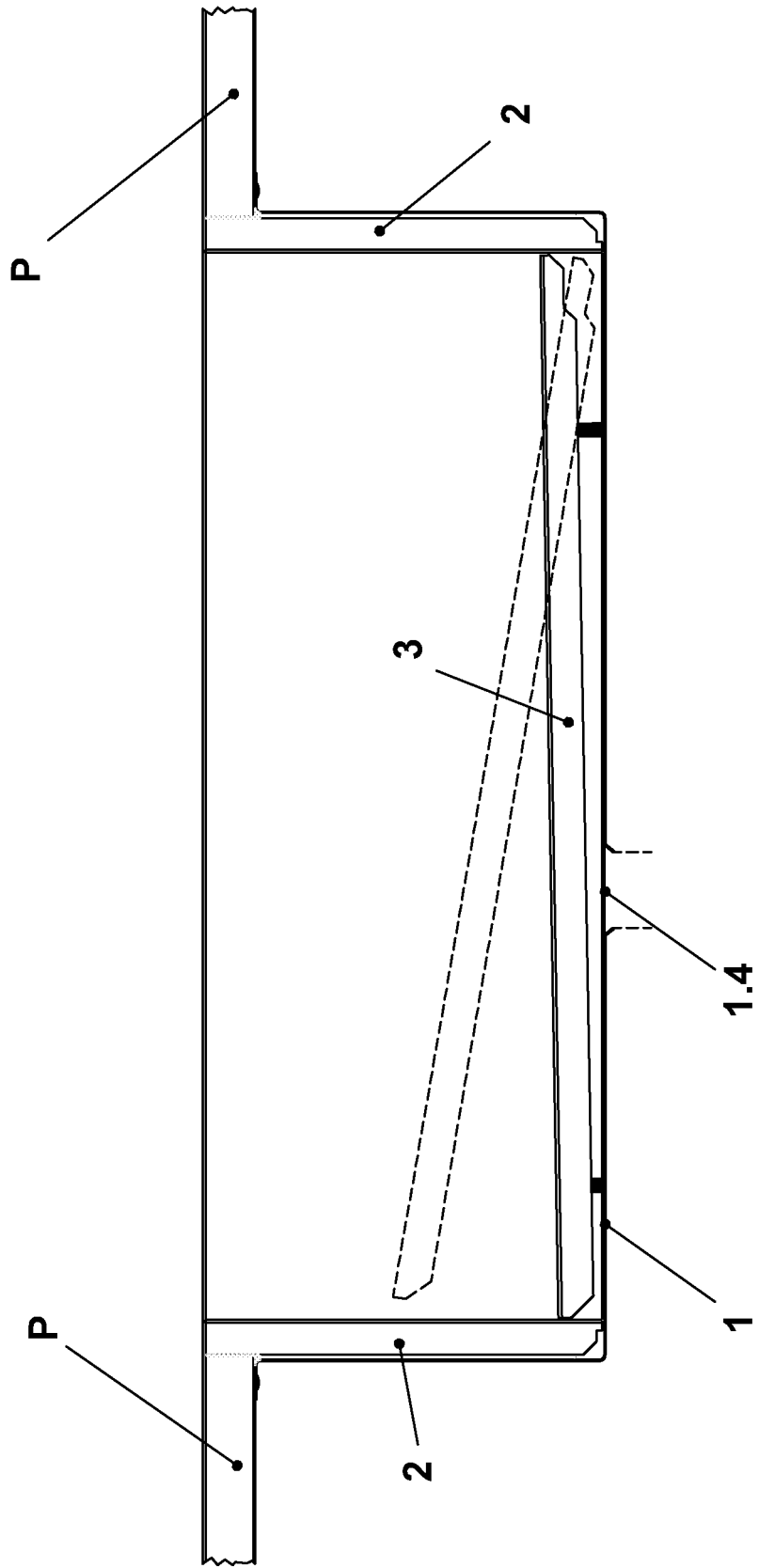


Fig. 1

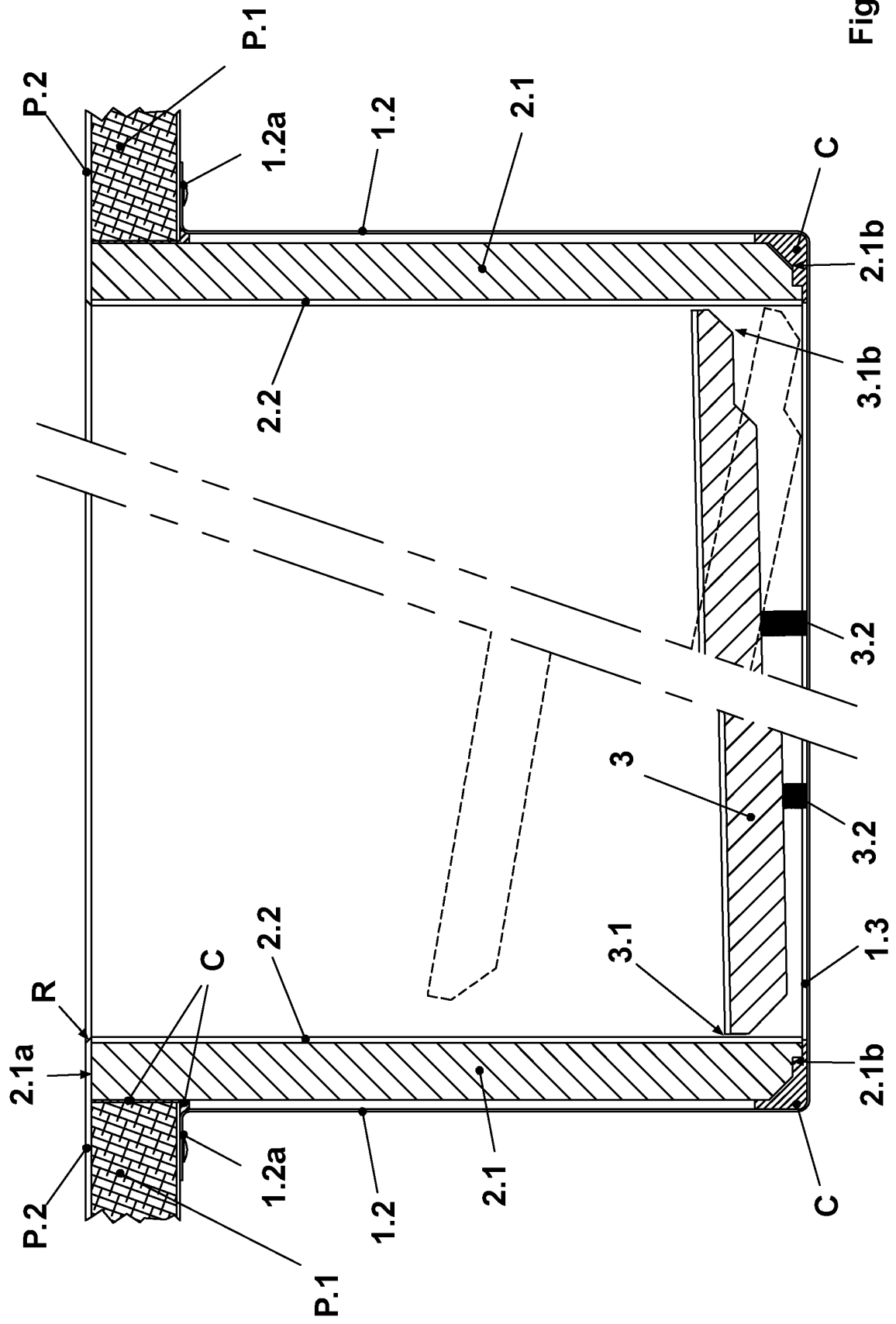


Fig. 2

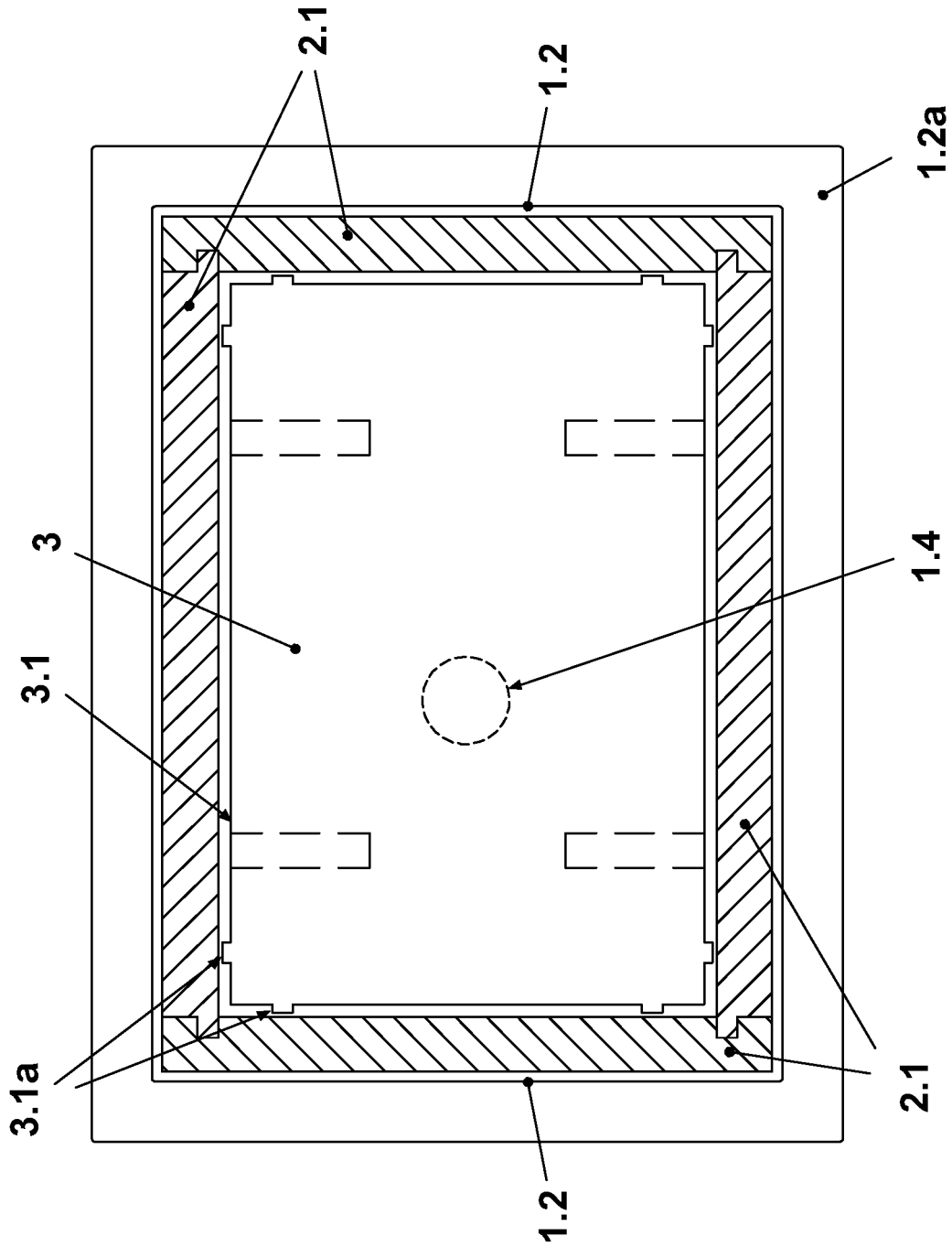


Fig. 3

REFERENCES CITED IN THE DESCRIPTION

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