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(54) **SHOWER TRAY WITH EDGE CLAMP**

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Description

[0001] The present invention relates to a shower tray having an edge clamp for clamping flexible floor covering material.

[0002] In particular for shower trays with higher sides, for example those which are not recessed into shower area flooring or are only recessed a small distance; the shower tray creates a step from the floor to the user-supporting upper surface of the tray. This 'step' also exists with so-called 'low-level' shower trays, but to a lesser extent.

[0003] When laying flexible plastics waterproof floor covering material around these types of shower trays, it is difficult to form a secure and watertight engagement between an edge of the floor covering material and the shower tray. If bonding is used, over time, the edge of the floor covering material simply pulls free, leading to a gap and thus a leak path. Additionally, if the adhesive is not continuously applied, a leak path to the floor area beneath the floor covering material is provided.

[0004] Document DE202006012825U describes the securement of a sealing strip into a foam element supporting a plate element. This document discloses the features of the preamble of claim 1. GB 2427820 and GB 2394175 describe a shower tray having an integral trough for receiving a flexible floor covering material and means for clamping the floor covering within the trough.

[0005] The present invention seeks to provide a solution to this problem.

[0006] According to the present invention, there is provided a shower tray comprising a shower tray body having an upper surface and one or more side surfaces defining a side or sides of the shower tray body, and an edge clamp for clamping flexible floor covering material along the said side or sides of the shower tray body, the edge clamp including a supporting element which is engaged or engageable with the shower tray body, and a clamping element, the in use supporting element supporting the flexible floor covering material and the in use clamping element clamping the flexible floor covering material to the supporting element so that the flexible floor covering material is indirectly engaged with the shower tray body, the edge clamp being reversible for storage within the shower tray body when not in use.

[0007] Preferable and/or optional features of the invention are set forth in claims 2 to 15, inclusive.

[0008] The invention will now be more particularly described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 shows a scrap perspective view of a corner of one embodiment of a shower tray, in accordance with the invention and in which an edge clamp can be seen in the storage or unused position; and

Figure 2 is a view of the shower tray shown in Figure 1, from another corner and in which the edge clamp

can be seen in the used position and with flexible floor covering in place; and

Figure 3 is a partial vertical section through the shower tray shown in Figure 2 with the section passing through an edge clamp retaining screw; and

Figure 4 is a scrap side view of the shower tray shown in Figure 1 showing the edge clamp components in the storage or closed position.

[0009] Referring to the drawings, there is shown a shower tray 10 which comprises a, typically moulded, shower tray body 12 and an edge clamp 14. The shower tray body 12 includes an upper surface 16 for supporting a user during showering and one or more integral side surfaces 18 which depend from a perimeter edge 20 of the upper surface 16. The upper surface 16 includes a fall for directing water to a drain 16', and the side surfaces 18 define sides 22 of the shower tray 10.

[0010] The edge clamp 14 is adapted to clamp flexible waterproof floor covering material 24, such as Altro RTM, along at least one of the sides 22 of the shower tray 10. To this end, the edge clamp 14 includes a supporting element 26 and a clamping element 28, both of which can be formed from extruded plastics or metal. The supporting element 26 is engaged or engageable with the side 22 of the shower tray body 12, for example, by bonding. The supporting element 26 has a substantially L-shaped lateral cross-section, and includes an arcuately ramped front surface 30, and planar bottom and rear surfaces 32, 34. The bottom and rear surfaces 32, 34 extend at right angles to each other.

[0011] The clamping element 28 has a generally T-shaped lateral cross-section and includes a clamping portion 36 and a foot portion 38. The foot portion 38 of the clamping element 28 is adapted to abut the front surface 30 of the supporting element 26, and the clamping portion 36 is adapted to overlap and thus clamp an edge of the waterproof floor covering material 24 to the ramped front surface 30 of the supporting element 26.

[0012] To prevent leakage between the shower tray body 12 and the edge clamp 14, the shower tray body 12 includes an edge clamp recess 40 which is formed in one or more of the sides 22. The edge clamp recess 40 extends to and includes the bottom edge 42 of the shower tray body 12. In this way, the edge clamp recess 40 undercuts the upper surface 16 of the shower tray body 12 to form an overhang 44. The overhanging perimeter portion 46 of the upper surface 16 of the shower tray body 12 can thus be considered as forming a wall of the recess 40.

[0013] The or each recess 40 is elongate, and, preferably, extends the length of the respective side 22 of the shower tray body 12. The recess 40 has a lateral cross-sectional profile which is adapted to receive the edge clamp 14 when reversed as a substantially complementarily fit. This is best understood from Figures 3 and 4.

As such, when the supporting element 26 of the edge clamp 14 is in a condition for supporting the floor covering, which, as best seen in Figure 3, corresponds to the ramped front surface 30 being oriented to face outwardly, an upper edge 48 of the supporting element 26 locates within an inner groove 50 formed in an upper surface 52 of the recess 40, and the supporting element 26, and in particular the ramped front surface 30, projects outwardly beyond the perimeter edge 20 of the upper surface 16 of the shower tray body 12. An upper edge 54 of the clamping element 28 is locatable in an outer groove 56 formed in an upper outer edge 58 of the recess 40 and parallel with the inner groove 50. The foot portion 38 of the clamping element 28 is thus braced against the front surface 30 of the supporting element 26, and the clamping portion 36 extends flushly from the shower tray body 12 to overlap an edge of the floor covering material 24 laid on the front surface 30 of the supporting element 26.

[0014] A screw-threaded fastener 60 is utilised to connect the clamping element 28 to the supporting element 26. The screw-threaded fastener 60 may also extend through the supporting element 26 to engage in the shower tray body 12. Due to the screw-threaded fastener 60, the clamping portion 36 thus clamps the floor covering material 24 to the supporting element 26.

[0015] The supporting element 26 can also be separately fastened to the floor of the installation area via further screw-threaded fasteners. The floor covering material is not pierced by the edge clamp or any screw-threaded fastener.

[0016] Due also to the inner and outer grooves 50, 56 of the recess 40, a ridge 62, being a portion of the shower tray body 12, is formed therebetween. With the clamping element 28 and the supporting element 26 located in the inner and outer grooves 50, 56, and interengaged, not only is the floor covering material 24 clamped therebetween, but also the ridge 62 between the inner and outer grooves 50, 56 is clamped therebetween. Consequently, the edge clamp 14 is also clamped to the shower tray body 12.

[0017] Since the edge clamp recess 40 is substantially complementarily profiled, the supporting element 26 and the clamping element 28 can be reversed in orientation and located within the recess 40 for storage and transportation. In this storage condition, the upper edge 54 of the clamping element 28 is received in the inner groove 50 of the recess 40, and the upper edge 48 of the supporting element 26 is received in the outer groove 56 of the recess 40. The rear surface 34 of the supporting element 26 is thus flush or substantially flush with the overhanging perimeter edge 20 of the upper surface 16 of the shower tray body 12.

[0018] Although the supporting element is separate of the clamping element, it is feasible that the edge clamp can be formed as one-piece, for example with hinge, which could be a living or live hinge, provided between the supporting element and the clamping element.

[0019] It is envisaged that the recess in the or each

side surface of the shower tray body could be dispensed with. In this case, the edge clamp is directly attached to the side surface of the shower tray body.

[0020] By use of the supporting element of the edge clamp, it is intended that the floor covering material is not directly engaged with the shower tray body. In other words, the supporting element holds the floor covering material in spaced relationship with the shower tray body. However, it is possible that the supporting element can be dispensed with and the clamping element can clamp the floor covering material directly to the side surface of the shower tray body.

[0021] Even if the edge clamp recess were dispensed with, it would still be convenient to allow storage of the edge clamp in the shower tray body. To this end, storage could be provided in an under surface of the shower tray.

[0022] Although not shown in the drawings, to allow the edge clamp to extend around one or more corner of the shower tray body, mitred sections are provided.

[0023] As shown in the drawings, the edge clamp can be provided in sections which, when combined, extend along the longitudinal extent of the side of the shower tray body.

[0024] Although the flexible floor covering material is typically a waterproof plastics material, it could be carpet or another non-waterproof floor covering.

[0025] Although the edge clamp recess has a substantially L-shaped lateral cross-section, the recess can be substantially U-shaped, thus being in the form of an elongate three-sided channel or groove and provided in the side of the shower tray body, partway between upper and lower perimeter edges thereof

[0026] It is thus possible to provide a shower tray which has a shower tray body and an edge clamp for clamping flexible floor covering material along at least one side of the shower tray body. It is further possible to provide an edge clamp which indirectly clamps a flexible floor covering material to the shower tray body. Additionally, storage of an edge clamp, when not in use, in the shower tray body is possible.

Claims

1. A shower tray (10) comprising a shower tray body (12) having an upper surface (16) and one or more side surfaces (18) defining a side or sides (22) of the shower tray body (12), and an edge clamp (14) for clamping flexible floor covering material (24) along the said side or sides (22) of the shower tray body (12), **characterized in that** the edge clamp includes a supporting element (26) which is engaged or engageable with the shower tray body, and a clamping element (28), the in use supporting element (26) supporting the flexible floor covering material (24), and the in use clamping element (28) clamping the flexible floor covering material (24) to the supporting element (26) so that the flexible floor covering material

is indirectly engaged with the shower tray body, the edge clamp (14) being reversible for storage within the shower tray body when not in use.

2. A shower tray (10) as claimed in claim 1, wherein a recess (40) is provided in one or more of the side surfaces (18) of the shower tray body (12), and the edge clamp (14) is for clamping flexible floor covering material (24) in a space provided by the recess (40).
3. A shower tray (10) as claimed in claim 2, wherein the recess (40) is elongate and extends under an upper surface (16) of the shower tray body (12).
4. A shower tray (10) as claimed in claim 2 or claim 3, wherein the shower tray (10) includes an overhanging perimeter edge (20) which in part defines the recess (40).
5. A shower tray (10) as claimed in any one of claims 2 to 4, wherein the recess (40) has an L-shaped or substantially L-shaped lateral cross-section.
6. A shower tray (10) as claimed in any one of claims 2 to 4, wherein the recess (40) is a groove or channel having a U-shaped or substantially U-shaped cross-section.
7. A shower tray (10) as claimed in any one of the preceding claims, wherein the supporting element (26) includes a ramped portion (30) for guiding the flexible floor covering material (24).
8. A shower tray (10) as claimed in claim 7, wherein the ramped portion (30) is arcuate.
9. A shower tray (10) as claimed in any one of the preceding claims, wherein, when the supporting element (26) is in a floor covering supporting condition, the supporting element (26) projects from the shower tray body (12).
10. A shower tray (10) as claimed in any one of the preceding claims, wherein, when the supporting element (26) is in a floor covering supporting condition, the clamping element (28) is flush or substantially flush with the shower tray body (12).
11. A shower tray (10) as claimed in any one of the preceding claims, wherein, in a storage condition, the supporting element (26) is flush or substantially flush with the shower tray body (12).
12. A shower tray (10) as claimed in any one of the preceding claims, wherein the supporting element (26) is separate of the clamping element (28).
13. A shower tray (10) as claimed in any one of the pre-

ceding claims, wherein the supporting element (26) and the clamping element (28) are unitarily formed as one-piece.

14. A shower tray (10) as claimed in any one of the preceding claims, wherein the edge clamp (14) is clampable to the shower tray body (12).
15. A shower tray (10) as claimed in any one of the preceding claims, wherein a portion (62) of the shower tray body (12) is locatable in the edge clamp (14).

Patentansprüche

1. Duschwanne (10), die aufweist: einen Duschwannenkörper (12) mit einer oberen Fläche (16) und einer oder mehr Seitenflächen (18), die eine Seite oder Seiten (22) des Duschwannenkörpers (12) definieren; und eine Randklammer (14) für das Festklemmen des elastischen Fußbodenbelagmaterials (24) längs der Seite oder der Seiten (22) des Duschwannenkörpers (12), **dadurch gekennzeichnet, dass** die Randklammer ein Tragelement (26), das mit dem Duschwannenkörper in Eingriff ist oder in Eingriff gebracht werden kann, und ein Klemmelement (28) umfasst, wobei bei Benutzung das Tragelement (26) das elastische Fußbodenbelagmaterial (24) trägt, und wobei bei Benutzung das Klemmelement (28) das elastische Fußbodenbelagmaterial (24) am Tragelement (26) festklemmt, so dass das elastische Fußbodenbelagmaterial indirekt mit dem Duschwannenkörper in Eingriff gebracht wird, wobei die Randklammer (14) für eine Aufbewahrung innerhalb des Duschwannenkörpers umkehrbar ist, wenn es nicht benutzt wird.
2. Duschwanne (10) nach Anspruch 1, bei der eine Aussparung (40) in einer oder mehreren der Seitenflächen (18) des Duschwannenkörpers (12) vorhanden ist, und bei der die Randklammer (14) für das Festklemmen des elastischen Fußbodenbelagmaterials (24) in einem Raum vorhanden ist, der durch die Aussparung (40) bereitgestellt wird.
3. Duschwanne (10) nach Anspruch 2, bei der die Aussparung (40) länglich ist und sich unter einer oberen Fläche (16) des Duschwannenkörpers (12) erstreckt.
4. Duschwanne (10) nach Anspruch 2 oder Anspruch 3, bei der die Duschwanne (10) einen überhängenden Außenrand (20) umfasst, der teilweise die Aussparung (40) definiert.
5. Duschwanne (10) nach einem der Ansprüche 2 bis 4, bei der die Aussparung (40) einen L-förmigen oder im Wesentlichen L-förmigen lateralen Querschnitt

aufweist.

6. Duschwanne (10) nach einem der Ansprüche 2 bis 4, bei der die Aussparung (40) eine Nut oder Rille mit einem U-förmigen oder im Wesentlichen U-förmigen Querschnitt ist. 5
7. Duschwanne (10) nach einem der vorhergehenden Ansprüche, bei der das Tragelement (26) einen abgeschrägten Abschnitt (30) für das Führen des elastischen Fußbodenbelagmaterials (24) umfasst. 10
8. Duschwanne (10) nach Anspruch 7, bei der der abgeschrägte Abschnitt (30) bogenförmig ist. 15
9. Duschwanne (10) nach einem der vorhergehenden Ansprüche, bei der, wenn sich das Tragelement (26) in einem den Fußbodenbelag tragenden Zustand befindet, das Tragelement (26) aus dem Duschwannenkörper (12) vorsteht. 20
10. Duschwanne (10) nach einem der vorhergehenden Ansprüche, bei der, wenn sich das Tragelement (26) in einem den Fußbodenbelag tragenden Zustand befindet, das Klemmelement (28) mit dem Duschwannenkörper (12) bündig oder im Wesentlichen bündig ist. 25
11. Duschwanne (10) nach einem der vorhergehenden Ansprüche, bei der das Tragelement (26) in einem Aufbewahrungszustand mit dem Duschwannenkörper (12) bündig oder im Wesentlichen bündig ist. 30
12. Duschwanne (10) nach einem der vorhergehenden Ansprüche, bei der das Tragelement (26) separat vom Klemmelement (28) ist. 35
13. Duschwanne (10) nach einem der vorhergehenden Ansprüche, bei der das Tragelement (26) und das Klemmelement (28) einheitlich als ein Teil ausgebildet sind. 40
14. Duschwanne (10) nach einem der vorhergehenden Ansprüche, bei der die Randklammer (14) an den Duschwannenkörper (12) festgeklemmt werden kann. 45
15. Duschwanne (10) nach einem der vorhergehenden Ansprüche, bei der ein Abschnitt (62) des Duschwannenkörpers (12) in der Randklammer (14) angeordnet werden kann. 50

Revendications

1. Bac de douche (10), comprenant un corps du bac de douche (12) comportant une surface supérieure (16) et une ou plusieurs surfaces latérales (18), dé-

finissant un côté ou des côtés (22) du corps du bac de la douche (12), et une bride de serrage de bordure (14) pour serrer un matériau de revêtement de sol flexible (24) le long dudit côté ou desdits côtés (22) du corps du bac de la douche (12), **caractérisé en ce que** la bride de serrage de bordure englobe un élément de support (26) engagé ou pouvant être engagé dans le corps du bac de la douche, et un élément de serrage (28), l'élément de support (26) supportant en service le matériau de revêtement de sol flexible (24), et l'élément de serrage (28) serrant en service le matériau de revêtement de sol flexible (24) sur l'élément de support (26), de sorte que le matériau de revêtement de sol flexible est engagé de manière indirecte dans le corps du bac de la douche, la bride de serrage de bordure (14) étant réversible en vue d'un stockage dans le corps du bac de la douche lorsqu'elle n'est pas en service.

2. Bac de douche (10) selon la revendication 1, dans lequel un évidement (40) est formé dans une ou dans plusieurs surfaces latérales (18) du corps du bac de la douche (12), la bride de serrage de bordure (14) servant à serrer le matériau de revêtement de sol flexible (24) dans un espace établi dans l'évidement (40).
3. Bac de douche (10) selon la revendication 2, dans lequel l'évidement (40) est allongé et s'étend au-dessous d'une surface supérieure (16) du corps du bac de la douche (12).
4. Bac de douche (10) selon les revendications 2 ou 3, dans lequel le bac de douche (10) englobe un bord périphérique en surplomb (20) définissant en partie l'évidement (40).
5. Bac de douche (10) selon l'une quelconque des revendications 2 à 4, dans lequel l'évidement (40) a une section transversale latérale en forme de L ou pratiquement en forme de L.
6. Bac de douche (10) selon l'une quelconque des revendications 2 à 4, dans lequel l'évidement (40) est constitué par une rainure ou un canal, ayant une section transversale en forme de U ou pratiquement en forme de U.
7. Bac de douche (10) selon l'une quelconque des revendications précédentes, dans lequel l'élément de support (26) englobe une partie en rampe (30) pour guider le matériau de revêtement de sol flexible (24).
8. Bac de douche (10) selon la revendication 7, dans lequel la partie en rampe (30) est arquée. 55
9. Bac de douche (10) selon l'une quelconque des revendications précédentes, dans lequel, lorsque l'élé-

ment de support (26) se trouve dans un état de support du revêtement du sol, l'élément de support (26) débordé à partir du corps du bac de la douche (12).

10. Bac de douche (10) selon l'une quelconque des revendications précédentes, dans lequel, lorsque l'élément de support (26) se trouve dans un état de support du revêtement du sol, l'élément de serrage (28) affleure ou affleure pratiquement le corps du bac de la douche (12). 5
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11. Bac de douche (10) selon l'une quelconque des revendications précédentes, dans lequel, dans un état de stockage, l'élément de support (26) affleure ou affleure pratiquement le corps du bac de la douche (12). 15
12. Bac de douche (10) selon l'une quelconque des revendications précédentes, dans lequel l'élément de support (26) est séparé de l'élément de serrage (28). 20
13. Bac de douche (10) selon l'une quelconque des revendications précédentes, dans lequel l'élément de support (26) et l'élément de serrage (28) sont formés ensemble d'une seule pièce. 25
14. Bac de douche (10) selon l'une quelconque des revendications précédentes, dans lequel la bride de serrage de bordure (14) peut être serrée sur le corps du bac de la douche (12). 30
15. Bac de douche (10) selon l'une quelconque des revendications précédentes, dans lequel une partie (62) du corps du bac de la douche (12) peut être positionnée dans la bride de serrage de bordure (14). 35

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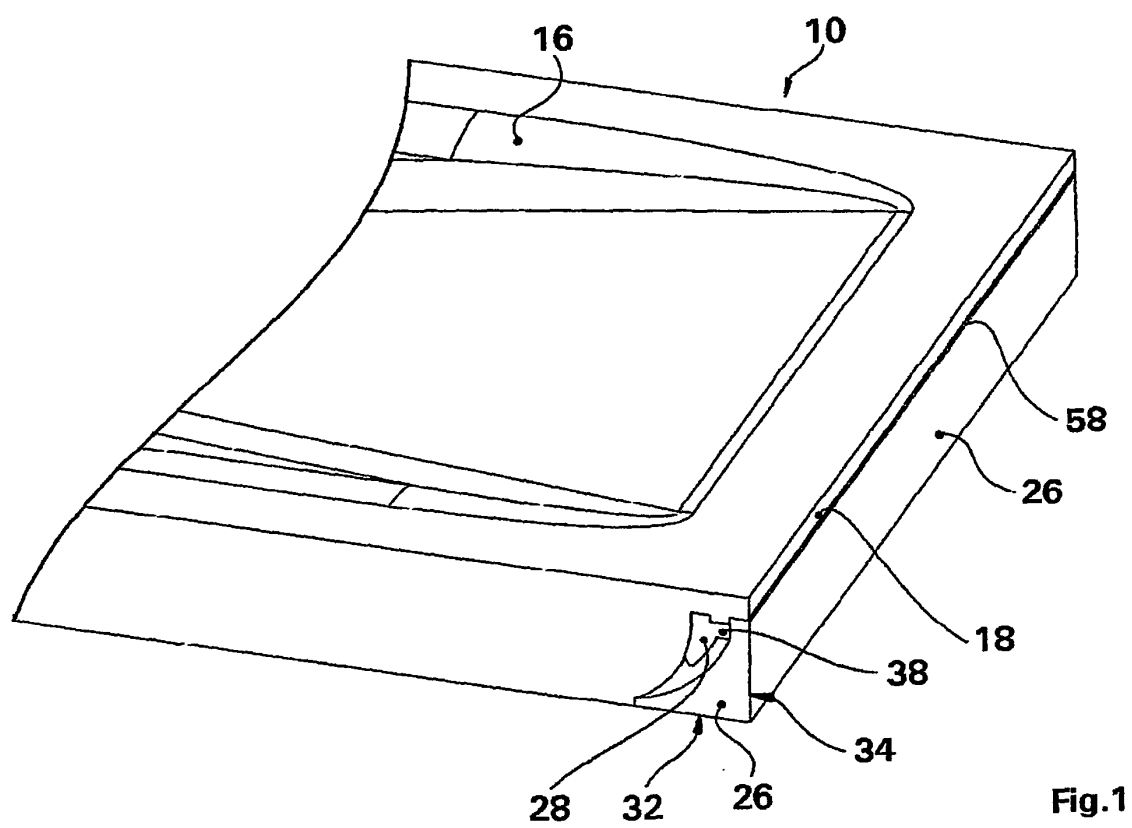


Fig.1

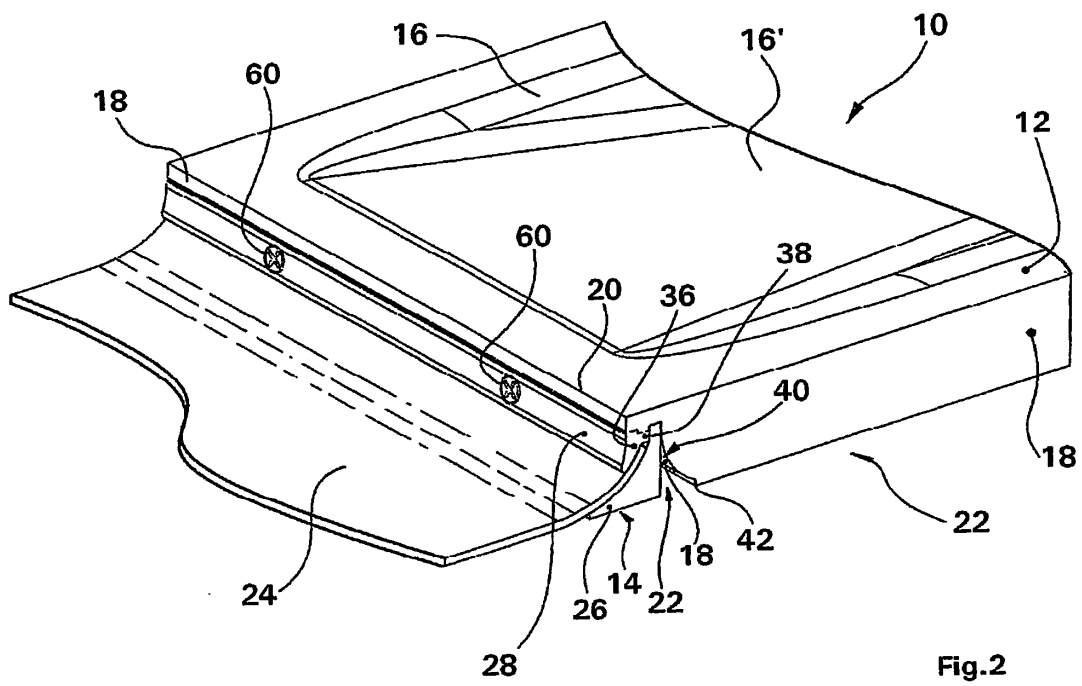


Fig.3

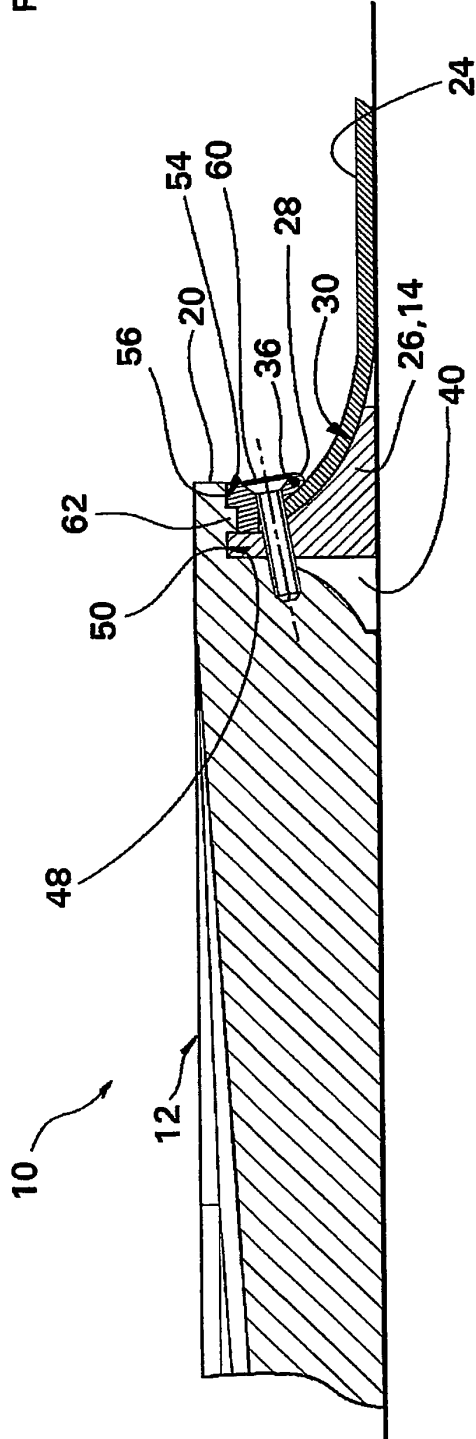
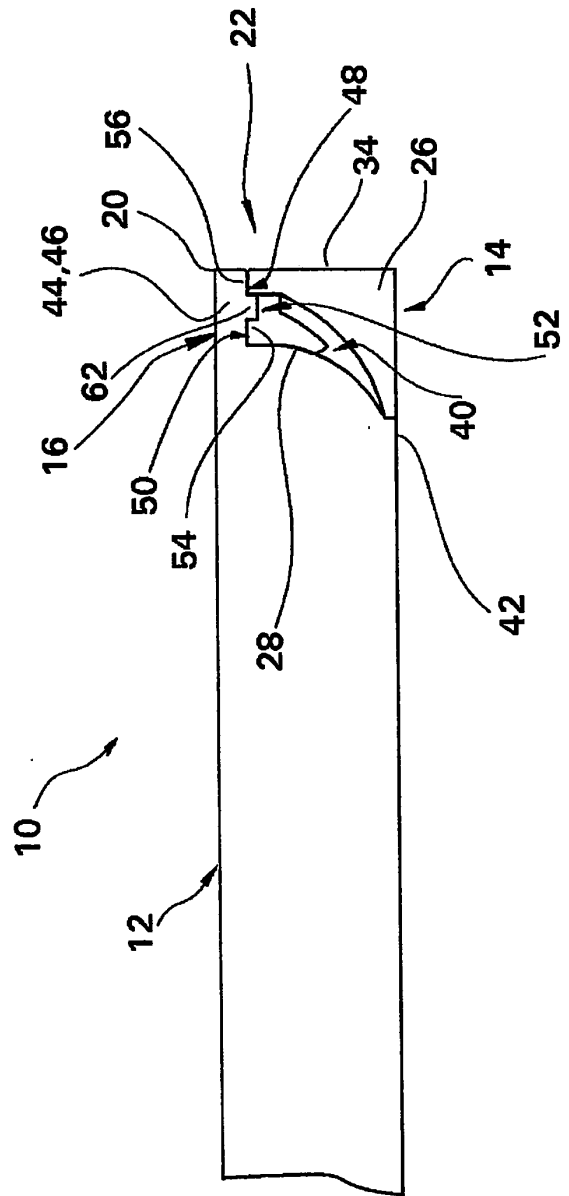


Fig.4



REFERENCES CITED IN THE DESCRIPTION

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