



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
12.12.2007 Bulletin 2007/50

(51) Int Cl.:
E03F 5/04 (2006.01)

(21) Application number: **07075451.0**

(22) Date of filing: **07.06.2007**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(30) Priority: **09.06.2006 NL 1031975**

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(54) **Drain with upright edge**

(57) The invention relates to a drain for discharging water flowing in from substantially one direction, which drain comprises:
- a collecting vessel which is open on the top side and which can be coupled to an outlet, and which collecting

vessel is provided with at least one inflow edge;
- a grating arranged in the collecting vessel which at least partially covers the top side of the collecting vessel;
wherein
the drain has an elevated side, higher than the inflow edge and opposite this inflow edge.

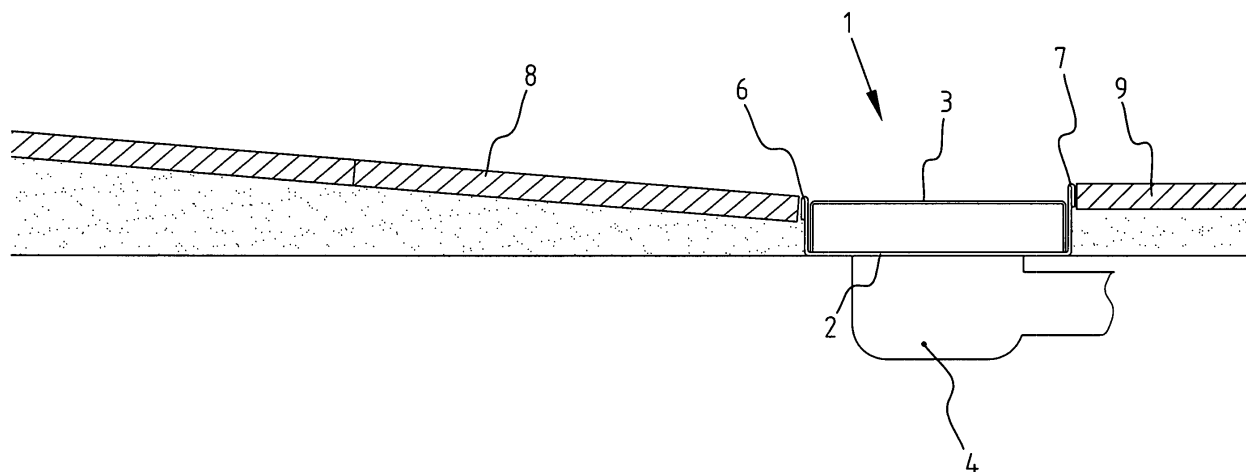


FIG. 2

Description

[0001] The invention relates to a drain for discharging water flowing in from substantially one direction, which drain comprises:

- a collecting vessel which is open on the top side and which can be coupled to an outlet, and which collecting vessel is provided with at least one inflow edge;
- a grating arranged in the collecting vessel which at least partially covers the top side of the collecting vessel.

[0002] Such a drain is already known, and in past years an elongate shower drain, sold under the brand name Easydrain, has become particularly known. This elongate drain has a collecting vessel and a grating placed therein, and is usually placed on one side of a shower space, in particular under the door of the shower space and over the whole width thereof. The slope of the shower floor can then run in one direction to the elongate shower drain.

[0003] It has however been found in some cases that a small part of the water and suds runs over the grating of the drain and thus enters the adjacent space. This is undesirable. It is moreover essential for the drain to extend over the whole width of the slope, whereby either the slope or the drain must be made to measure.

[0004] The object of the invention is therefore to provide a drain wherein the above stated drawbacks are alleviated or even obviated.

[0005] This object is achieved with a drain according to the preamble which is characterized in that the drain has an elevated side, higher than the inflow edge and opposite this inflow edge.

[0006] Water and suds flowing over the grating are slowed and stopped by the elevated side so that they can still be discharged via the collecting vessel.

[0007] In a preferred embodiment an edge of the collecting vessel is elevated and forms the elevated side. This can be carried out in very simple manner from a manufacturing engineering viewpoint.

[0008] In another preferred embodiment of the drain according to the invention the grating protrudes above the collecting edge on at least the elevated side. An elevation of the grating here forms the barrier to water and suds running over the grating. The advantage of this embodiment is that already existing drains can be readily modified by replacing the grating.

[0009] In yet another embodiment of the drain according to the invention the upper surface of the grating rises from the collecting edge to the elevated side. This creates the appearance of a completely flat drain, while an elevation forming a barrier is nevertheless arranged.

[0010] In yet another embodiment of the drain according to the invention the grating has a substantially U-shaped cross-section with an upper surface and two de-

scending side surfaces.

[0011] In yet another embodiment of the drain according to the invention the upper surface protrudes above the inflow edge, and the side surface is provided with openings adjacently of the inflow edge. Approaching water will immediately come up against the side of the grating and there flow via the openings into the collecting vessel. Owing to the elevated upper surface the water and possible suds will not be able to flow over this upper surface. The upper surface can herein also be provided with openings, this further reducing the chance of overflowing.

[0012] Yet another embodiment of the drain according to the invention comprises a separate strip adjacent to the drain and having an edge which protrudes above the inflow edge in order to form the elevated side. The grating preferably comprises passage openings in the upper surface.

[0013] These and other features of the invention are further elucidated with reference to the accompanying drawings.

[0014] Figures 1A and 1B show perspective views of a first embodiment of a drain according to the invention.

[0015] Figure 2 shows a cross-sectional view of the drain according to figure 1 incorporated in a floor.

[0016] Figure 3 shows a second embodiment of a drain according to the invention.

[0017] Figures 4A and 4B show two variants of a third embodiment of a drain according to the invention.

[0018] Figure 5 shows a fourth embodiment of a drain according to the invention in cross-section.

[0019] Figure 6 shows a fifth embodiment of the drain according to the invention in cross-section.

[0020] Figure 7 shows a sixth embodiment of the invention in cross-section.

[0021] Figures 8A and 8B show respectively a top view and cross-sectional view of a connecting strip for a drain according to the invention.

[0022] Figure 9 shows a top view of a seventh embodiment of a drain according to the invention.

[0023] Figure 10 shows a cross-sectional view of an eighth embodiment of a drain according to the invention.

[0024] Figures 1A and 1B show perspective views of a first embodiment of a drain 1 according to the invention. Drain 1 has a collecting vessel 2 with a grating 3 placed therein. Arranged on the underside of collecting vessel 2 is a syphon 4 which can be connected to a drain pipe via a connection 5. Collecting vessel 2 has an inflow edge 6 and, located opposite, an elevated edge 7 forming the elevated side of drain 1.

[0025] Figure 2 shows drain 1 in cross-sectional view and incorporated in a floor of for instance a shower. Shower floor 8 is provided with for instance tiles and slopes downward toward inflow edge 6. Water falling onto shower floor 8 is thus carried via the created slope to drain 1. Floor 9 of the adjacent space connects to elevated side 7. The elevated side 7 of drain 1 prevents water and suds that run over grating 3 from coming to lie

on floor 9.

[0026] Figure 3 shows a second embodiment 10 of a drain. Collecting vessel 11 is provided here with two up-right edges 12 of equal height. Placed in collecting vessel 11 is a grating 13 which has an elevation 14 on one side. This elevation 14 forms a barrier for water and suds flowing over grating 13.

[0027] Figures 4A and 4B show a third embodiment 20 of a drain according to the invention. Drain 20 here also has a collecting vessel 21 with side edges 22 of equal height. Shower floor 23 connects flush to inflow edge 22 of drain 20. Arranged on the opposite side is a strip 24 which can be adjusted to the height of the adjacent floor 25. In figure 4A the adjacent floor 25 lies at the same level as grating 26, and strip 24 provides a barrier. In the variant according to figure 4B, wherein the adjacent floor 25 is slightly elevated relative to grating 26, strip 24 also provides the necessary barrier.

[0028] Figure 5 shows a cross-sectional view of a fourth embodiment 30 of the drain according to the invention. This drain 30 has a collecting vessel 31 with an inflow edge 32 and an elevated edge 33 which is higher than inflow edge 32. This elevated edge 33 provides the barrier. Drain 30 is further provided with a grating 34, the upper surface of which extends from inflow edge 32 to elevated edge 33. Drain 30 hereby has an appearance similar to that of a conventional drain. However, due to the rising upper surface of grating 34 the flow of water and suds over grating 34 is prevented, and a barrier is thus created for this purpose in combination with the elevated edge 33.

[0029] Figure 6 shows a cross-sectional view of a fifth embodiment 40 of a drain according to the invention. Collecting vessel 41 is here also provided with two edges 42 of equal height. These two edges 42 both connect to shower floor 43 and adjacent floor 44. Placed in collecting vessel 41 is a grating 45, the upper surface of which is higher than edges 42. The side surface 46 adjacent to shower floor 43, and thus to inflow edge 42, is provided with openings 47. This drain 40 thus has the appearance of a threshold and moreover prevents water and suds flowing over upper surface 45 to the adjacent floor 44. This is prevented in that water and suds flowing over shower floor 43 come up against side surface 46 and there enter collecting vessel 41 directly via openings 47.

[0030] Figure 7 shows a sixth embodiment 50 of a drain according to the intention. The collecting vessel here again has two side edges of equal height and grating 52 is provided with an elevated side 53 which forms the desired barrier. In this embodiment grating 52 protrudes over the edges of collecting vessel 51.

[0031] Figure 8A shows a top view of a shower floor 60 with a drain 61 according to the invention therein. This drain can for instance be one of the foregoing embodiments.

[0032] When drain 61 does not extend wholly between the two walls 62, there is then still a danger of water and suds flowing from shower floor 60 to the adjacent floor

63. In order to prevent this, a strip 64, which forms a barrier for the other parts, is arranged adjacently of shower drain 61, which is provided with an elevated side according to the invention. Figure 8B shows a cross-section of this strip 64. Strip 64 can be made to length so that a standard-size drain can still discharge water from the entire slope.

[0033] Figure 9 shows a seventh embodiment 70 of a drain according to the invention. This drain 70 is curved and for instance suitable for corner shower cubicles with semicircular shower doors. Barrier strips 71 corresponding to strips 64 shown in figures 8A and 8B are arranged adjacently of semicircular drain 70.

[0034] Figure 10 shows an eighth embodiment 80 of a drain according to the invention. This drain 80 has a collecting vessel 81 with an inflow edge 82 and an elevated edge 83. Inflow edge 82 connects to shower floor 84 and elevated edge 83 connects to adjacent floor 85. Because elevated edge 83 forms a barrier, it is possible to reduce the distance between inflow edge 82 and elevated edge 83. A narrower grating 86 is then placed in this space. However, in order to ensure a good through-flow of the inflowing water, collecting vessel 81 must have a reservoir 87 in which the collected water can accumulate and subsequently be discharged via an outlet. The advantage of this embodiment is that a very narrow drain is hereby obtained which is practically concealed from view.

Claims

1. Drain for discharging water flowing in from substantially one direction, which drain comprises:

- a collecting vessel which is open on the top side and which can be coupled to an outlet, and which collecting vessel is provided with at least one inflow edge;
- a grating arranged in the collecting vessel which at least partially covers the top side of the collecting vessel;

characterized in that

the drain has an elevated side, higher than the inflow edge and opposite this inflow edge.

2. Drain as claimed in claim 1, wherein an edge of the collecting vessel is elevated and forms the elevated side.
3. Drain as claimed in claim 1 or 2, wherein the grating protrudes above the collecting edge on at least the elevated side.
4. Drain as claimed in claim 3, wherein the upper surface of the grating rises from the collecting edge to the elevated side.

5. Drain as claimed in any of the foregoing claims, wherein the grating has a substantially U-shaped cross-section with an upper surface and two descending side surfaces.

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6. Drain as claimed in claim 5, wherein the upper surface protrudes above the inflow edge, and the side surface is provided with openings adjacently of the inflow edge.

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7. Drain as claimed in any of the foregoing claims, comprising a separate strip adjacent to the drain and having an edge which protrudes above the inflow edge in order to form the elevated side.

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8. Drain as claimed in any of the foregoing claims, wherein the grating comprises passage openings in the upper surface.

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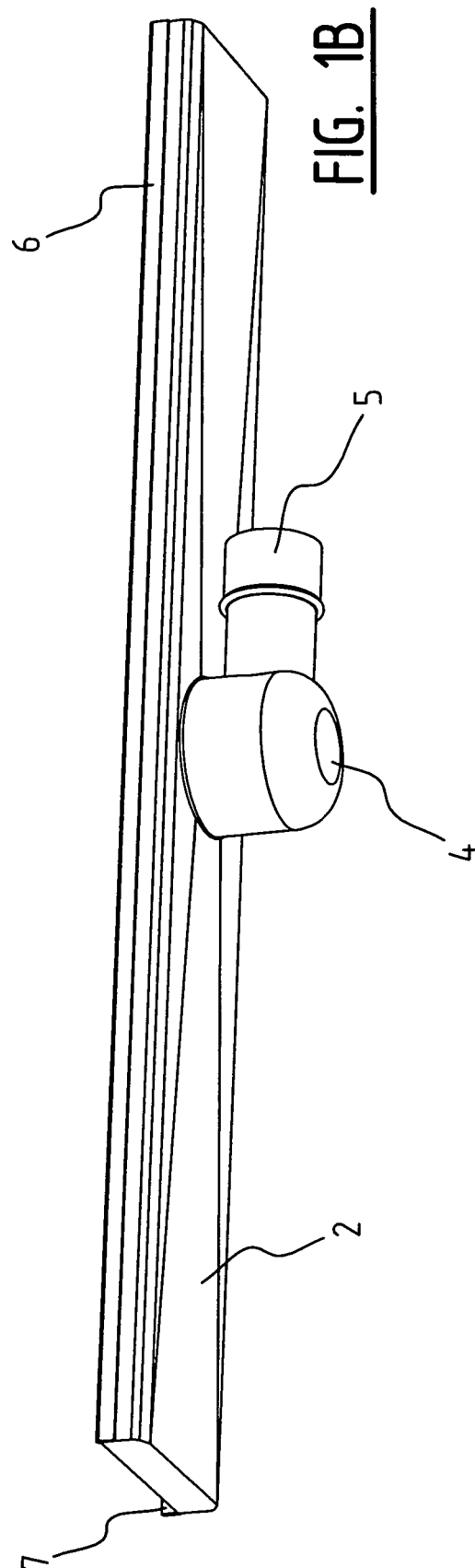
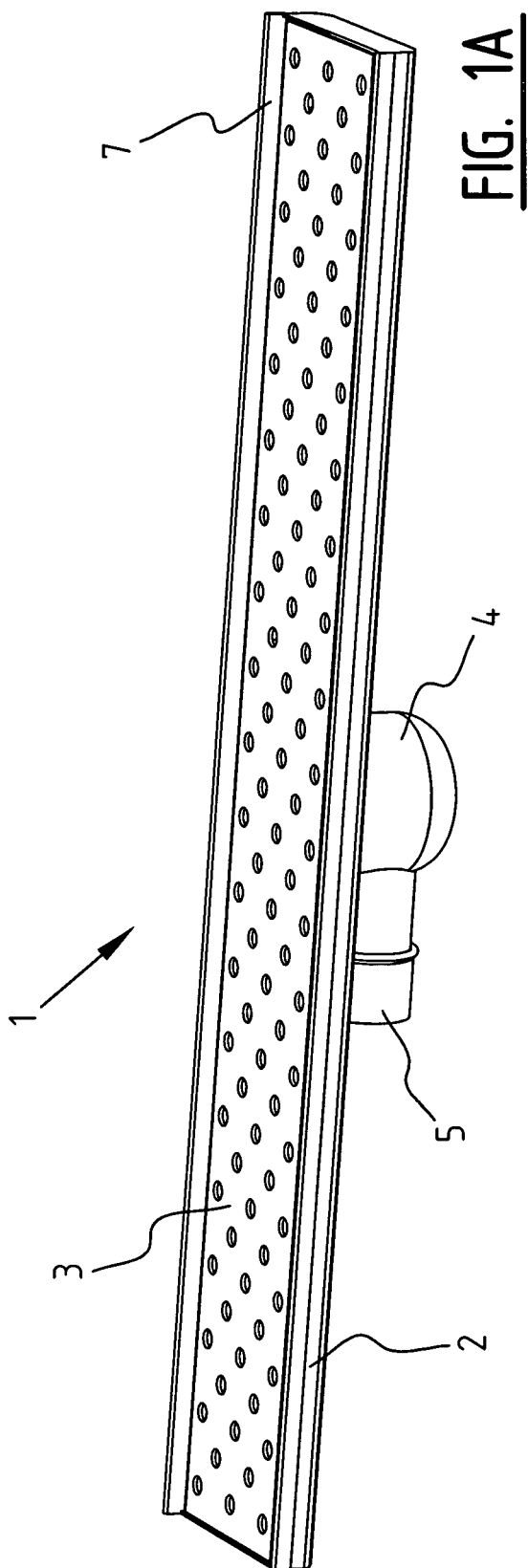
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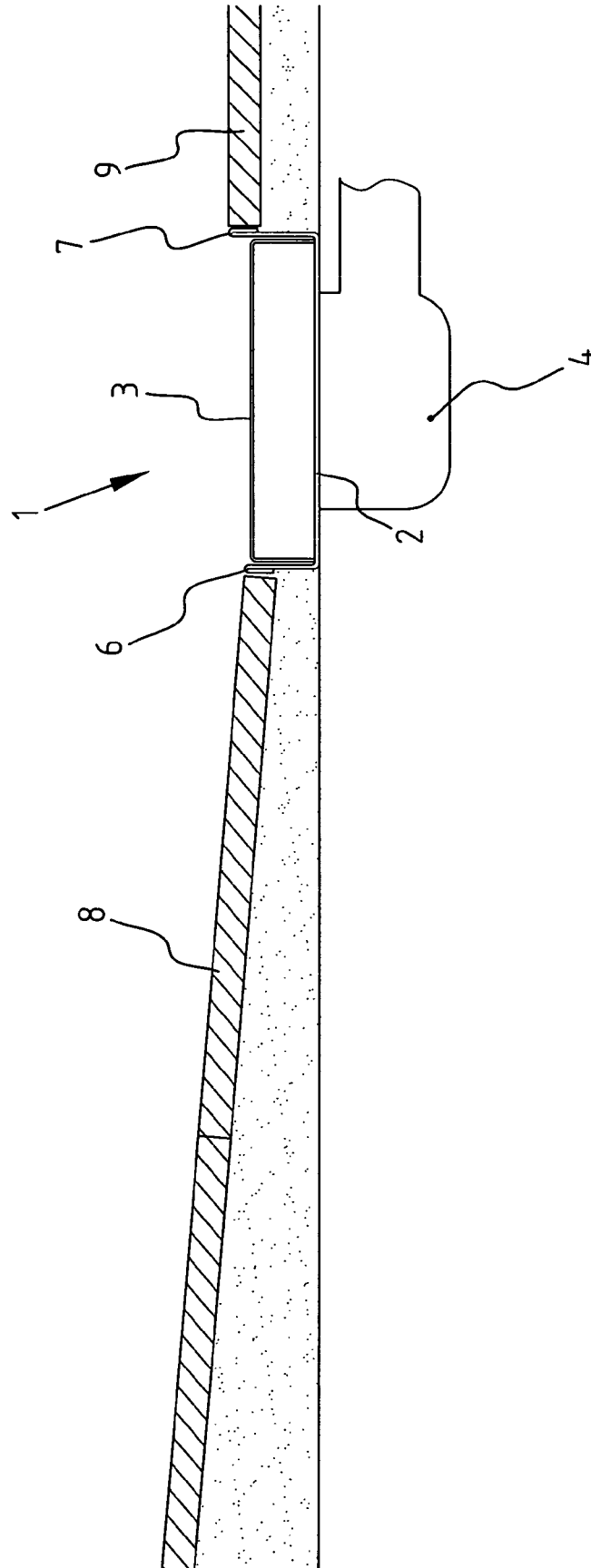


FIG. 2

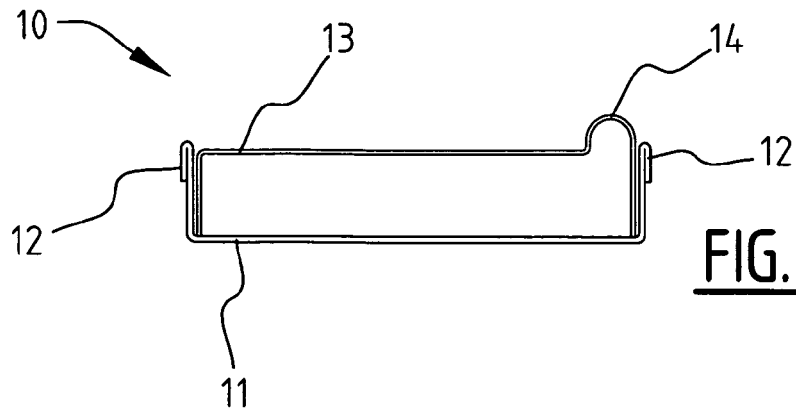


FIG. 3

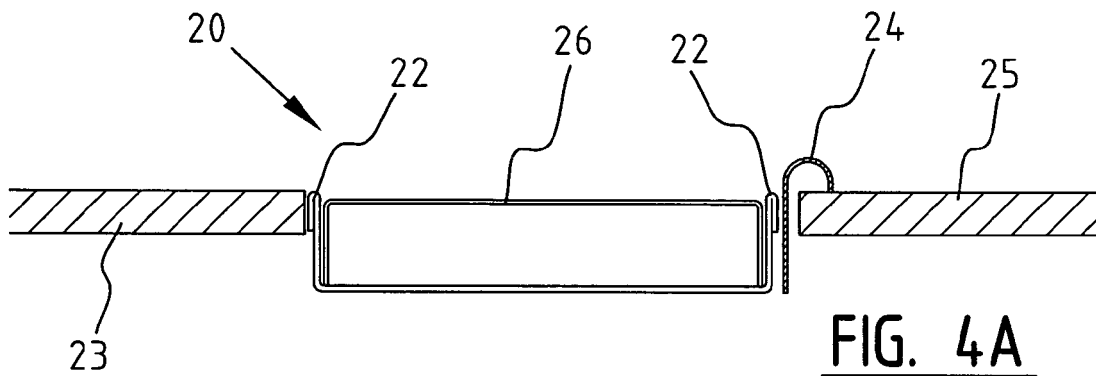


FIG. 4A

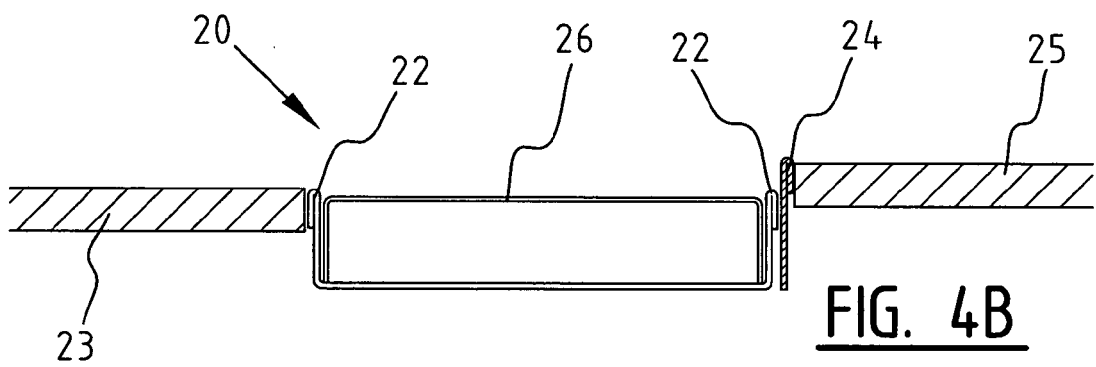


FIG. 4B

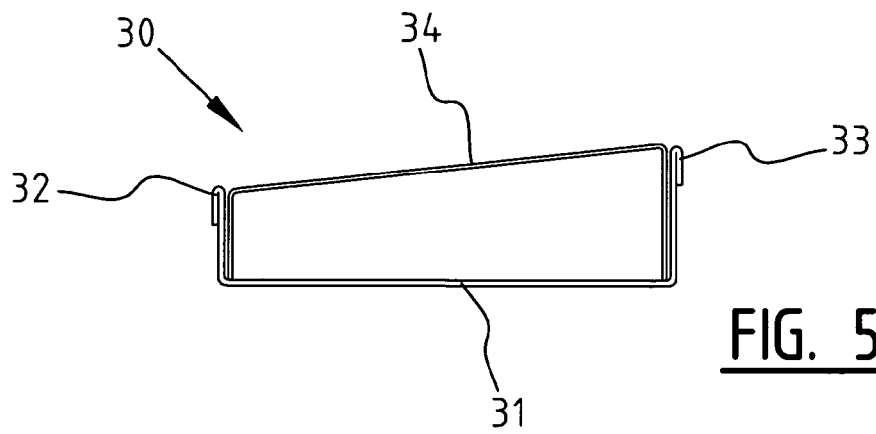
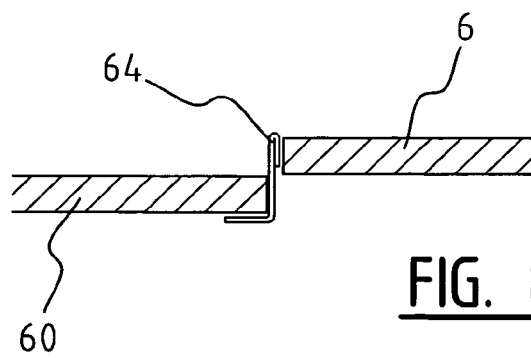
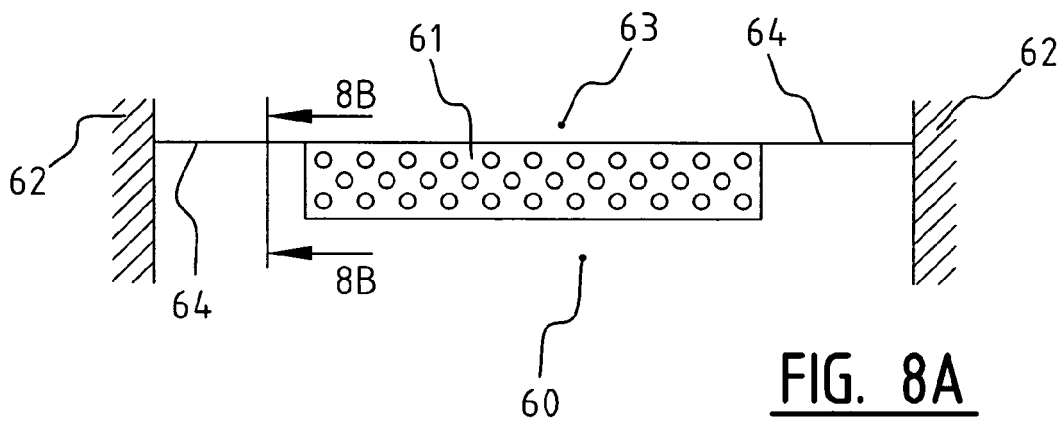
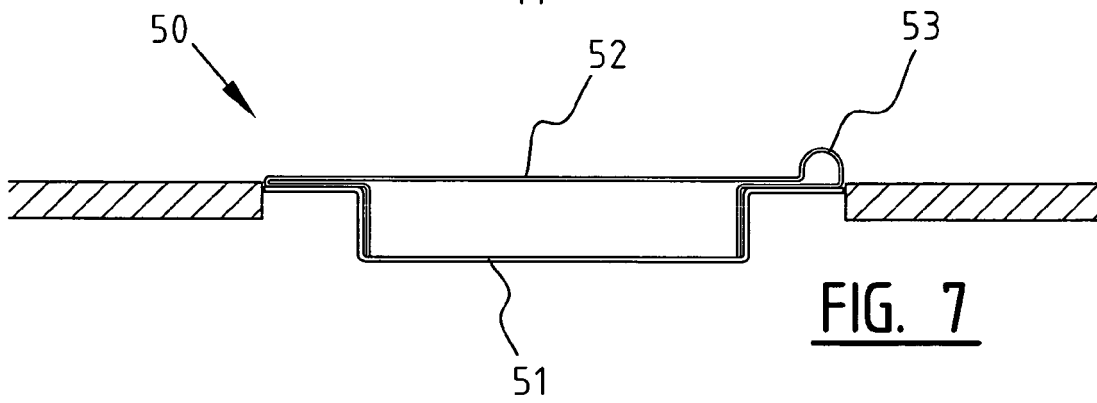
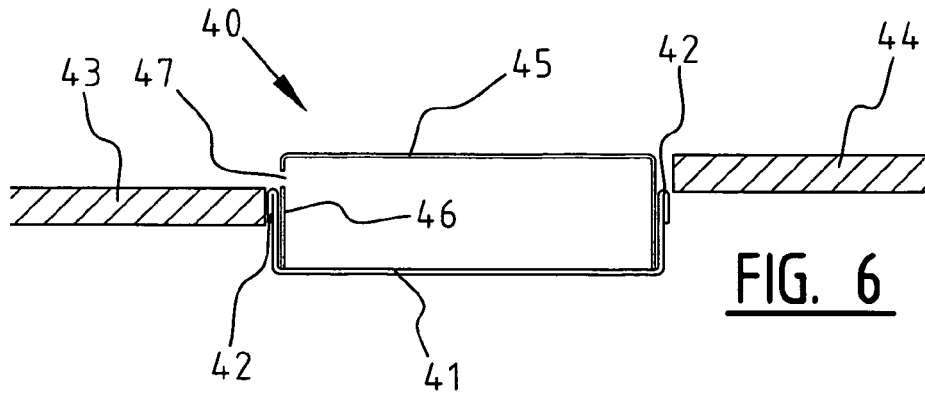


FIG. 5



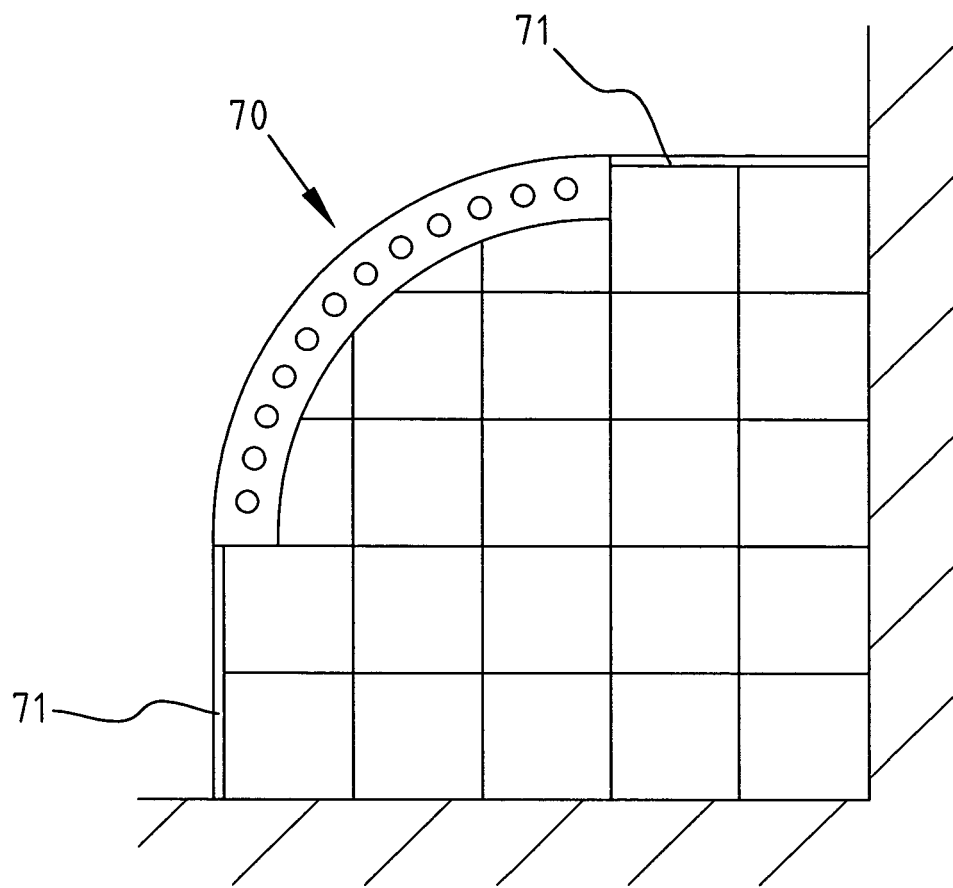


FIG. 9

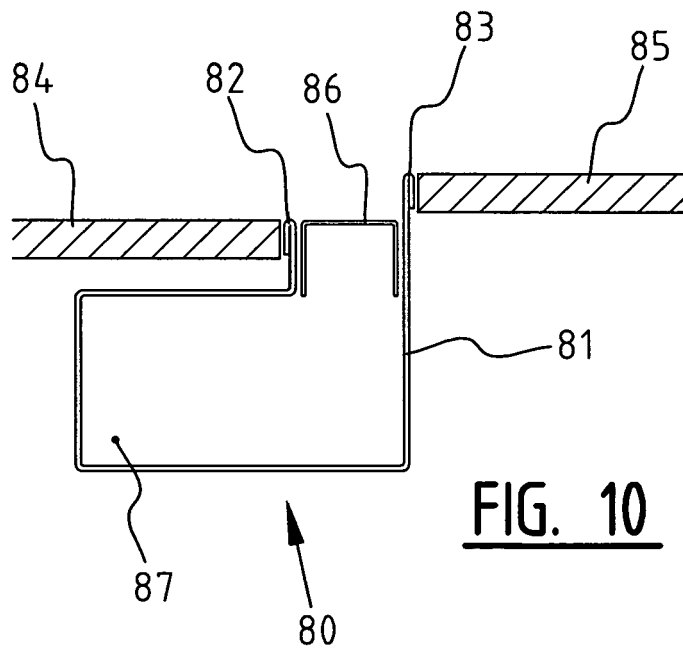


FIG. 10



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 07 5451

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			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		20 September 2007	De Coene, Petrus
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 07 07 5451

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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