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(54) **Washbasin with concealed outlet**

(57) In a washbasin the sloping bottom surface (20) covers an outlet duct (26), which extends from an inlet opening (24) in a vertical wall of the sink, therefore

scarcely visible, to an outlet opening (28) for the trap device, completely covered by said sloping surface (20).

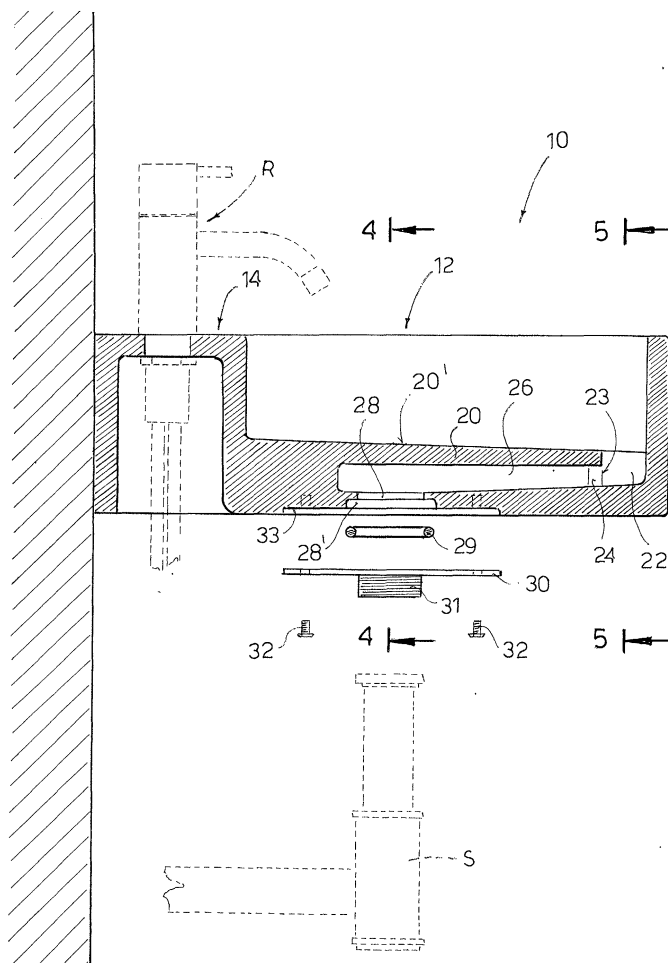


FIG. 3

EP 1 367 185 A1

Description

[0001] The invention refers to a washbasin or sink, or wash stand.

[0002] Prior art washbasins currently on the market all have a bowl (of china, glass, resin or steel) generally shaped like a hopper, tapering toward the hole that houses the outlet device. The outlet device comprises a drain piece which is inserted in the outlet hole, is completed at the top by a flange and receives in its top part a net or filter, or a removable rubber stopper, or a push-up stopper with a stem.

[0003] The outlet aperture inevitably remains on view in the washbasin, is often a receptacle for dirt, and is generally associated by the user with an idea of uncleanliness.

[0004] An aim of this application is to provide a washbasin wherein the water outlet opening is not apparent.

[0005] A further aim is to provide such a washbasin that can be manufactured in a variety of shapes that could not previously be made.

[0006] Yet a further aim is to provide a washbasin that is particularly easy to mount.

[0007] These objects have been achieved with a washbasin as said in claim 1.

[0008] Further advantageous features are disclosed in the dependent claims.

[0009] In other words, the new washbasin comprises a bottom of the bowl thereof which defines a receiving channel and the bottom is formed with an outlet duct the inlet aperture of which opens in a substantially vertical wall of the channel. Said outlet channel ends in a an outlet opening, below which a trap of a per-se known type is mounted by means of a plate which is part of the invention and can be fixed by screwing to the underneath of the basin, through a seal.

[0010] The new sink can be made in various new shapes, always having the outlet area practically concealed from the user. Moreover, thanks to the mounting system with a plate, assembly and removal of the trap are particularly easy.

[0011] Exemplary unrestrictive embodiments of the invention will be described below with reference to the appended drawings, wherein:

Figure 1 is a side elevational view of a first embodiment of a sink or washbasin according to the invention; a conventional tap and a conventional trap are indicated with dashed lines;

Figure 2 is a top plan view of the sink according to the invention in a first embodiment;

Figure 3 is a sectional view taken along the median plane indicated by 3-3 in Figure 2, with the trap assembling parts drawn in exploded view; a tap and a trap are drawn with dashed lines;

Figure 4 is a sectional view taken along the plane 4-4 indicated in Figure 3;

Figure 5 is sectional view taken along the plane 5-5

in Figure 3;

Figure 6 is a vertical sectional view through a variant of the washbasin;

Figure 6A is an exploded part sectional and part axonometric view along the washbasin of Figure 6 and shows the course of water;

Figure 7 is a top plan view, similar to Figure 2, of a further variant of the washbasin;

Figure 8 is a sectional view taken along the plane indicated by 8-8 in Figure 7;

Figure 9 is a perspective view of a supporting frame of the washbasin.

[0012] With reference to the figures, a washbasin according to a preferred embodiment of the invention is illustrated in Figures 1-5 and 10 referenced as a whole. The washbasin 10 has a bowl part 12 which ends on one side with a raised part 14 for assembly of the taps. The raised part 14 has a hole 15 to accommodate a tap assembly. A tap assembly is drawn with dashed lines in some figures, is of a known type and not part of this invention, and is referenced R. The raised part with the housing for the taps could in any case be omitted. A washbasin 10a for use with a wall-mounted tap assembly is illustrated in Figures 6 and 6a and bears the same reference numerals as the washbasin of Figures 1-5; the following description applies to both.

[0013] The bowl part is drawn and described with a quadrangular shape in plan view, but it is understood that it can have any desired shape.

[0014] The basin has side walls 16, 17, 18, 19 and a bottom 20. The bottom extends to the side walls 16, 17 and 18 and is joined thereto, whilst it ends a short distance from the wall 19 defining a channel 22 therewith. More precisely, the channel 22 is defined between a substantially vertical surface 19' of the wall 19 and a substantially vertical surface 23, facing thereto, of the bottom 20. The surface 23 is interrupted by an opening 24, preferably but not necessarily central.

[0015] The upper surface 20' of the bottom 20 slopes toward the channel 22 and preferably, but not necessarily, also toward a central line a 20 in register with opening 24. The bottom surface of channel 22 is slanting toward opening 24. The surface 23 in which the opening is formed could also be overhanging or in any case could have an overhanging upper portion to better conceal the opening 24 from the sight of a user in a normal position of use.

[0016] The opening 24 is an inlet opening of an outlet duct 26 formed in the bottom 20 of the basin of the bowl and the outlet duct extends to a bottom outlet opening 28. The outlet duct 26 advantageously slopes downward from the opening 24 toward the opening 28. The opening 28 has a peripheral housing 28' for a seal 29. A plate 30 provided with a threaded collar 31 is screwed with screws 32 to a bottom wall of the bottom, possibly received in an appropriate housing 33, and holds an O-ring 29 in a sealing position. A conventional trap S is

drawn with dashed lines in the figures and is mounted on the threaded collar 31.

[0017] It will be noted that the water delivered by the tap R flows along the surface 20' of the bottom 20 toward the channel 22 and thence flows through the opening 24 along the duct 26 and into the trap S, as illustrated with the arrow A in Figure 6A. A user who stands beside the washbasin notices the flow of water without seeing the outlet opening clearly, and thus has a more pleasant view than with conventional washbasins. Furthermore, the plate assembly of the trap described above is particularly easy, which undoubtedly represents an advantage both for installation and for maintenance.

[0018] The washbasin of the invention can be made in different ways from those illustrated and described with reference to Figures 1-6A.

[0019] For example, in Figures 7 and 8 a washbasin 100 is illustrated in which the collection or receiving channel 122 is formed on the tap portion side 114, that is, further away from the user. Other elements of the washbasin 100, corresponding to analogous elements of the washbasin 10, bear the same reference numbers increased by 100, and it is not considered necessary to provide a new description of some of them. It will be noted that in the washbasin 100 the inlet opening 124 faces toward the tap and the duct 126 extends in the proximal part of the bottom, with respect to the tap area, instead of in the distal part.

[0020] Solutions with the channel 22 extending along one side of the basin, for example along the side 16 or 17, can also be provided.

[0021] Although the washbasin of the invention can be wall-mounted in any suitable way desired, a preferred frame for use with the sink is illustrated in Figure 9. The frame 40 comprises two brackets 41, 42, with a plate 43, 44, respectively, for fixing to the wall and a supporting arm 45 46, respectively, with screws or constraining means for the washbasin. A distance rod 47 joins the arms and is provided in a suitable length according to the size of the sink.

[0022] It is understood that all variations on what is described that are accessible to an expert in the field come within the scope of the invention as set forth in the appended claims.

Claims

1. A washbasin comprising a bowl part (12; 112) to cooperate with a fluid input, said bowl part comprising a bottom (20; 120) **characterised in that** said bottom defines a receiving or collection channel (22; 122) and is formed with a duct (26; 126) which has an inlet opening (24; 124) on said receiving channel and an outlet opening (28; 128) with means for connection to an outlet device.
2. A washbasin according to claim 1, **characterised**

in that the opening is made in a substantially vertical or undercut surface (23) of the bottom.

3. A washbasin according to claim 1 **characterised in that** said channel (22; 122) is defined between said bottom and a wall of the basin.
4. A washbasin according to claim 1, **characterised in that** it comprises a bottom plate (30; 130) with a threaded collar for attachment of a trap.
5. A washbasin according to claim 1, **characterised in that** the upper surface (20) of the bottom slopes toward the channel (22; 122) and the surface of the channel slopes toward said inlet opening.
6. A washbasin according to claim 1 further comprising a raised part (14) to accommodate the taps.
7. A washbasin according to claim 1 **characterised in that** the channel is formed in one of the following positions: between the bottom and a wall of the washbasin situated toward the user, between the bottom and a wall of the washbasin opposite the user, between the bottom of the sink and a side wall.
8. A sink according to claim 1 **characterised in that** it is supported on a frame that comprises two brackets for fixing to a wall and a distance piece to space the brackets, provided according to the size of the sink.

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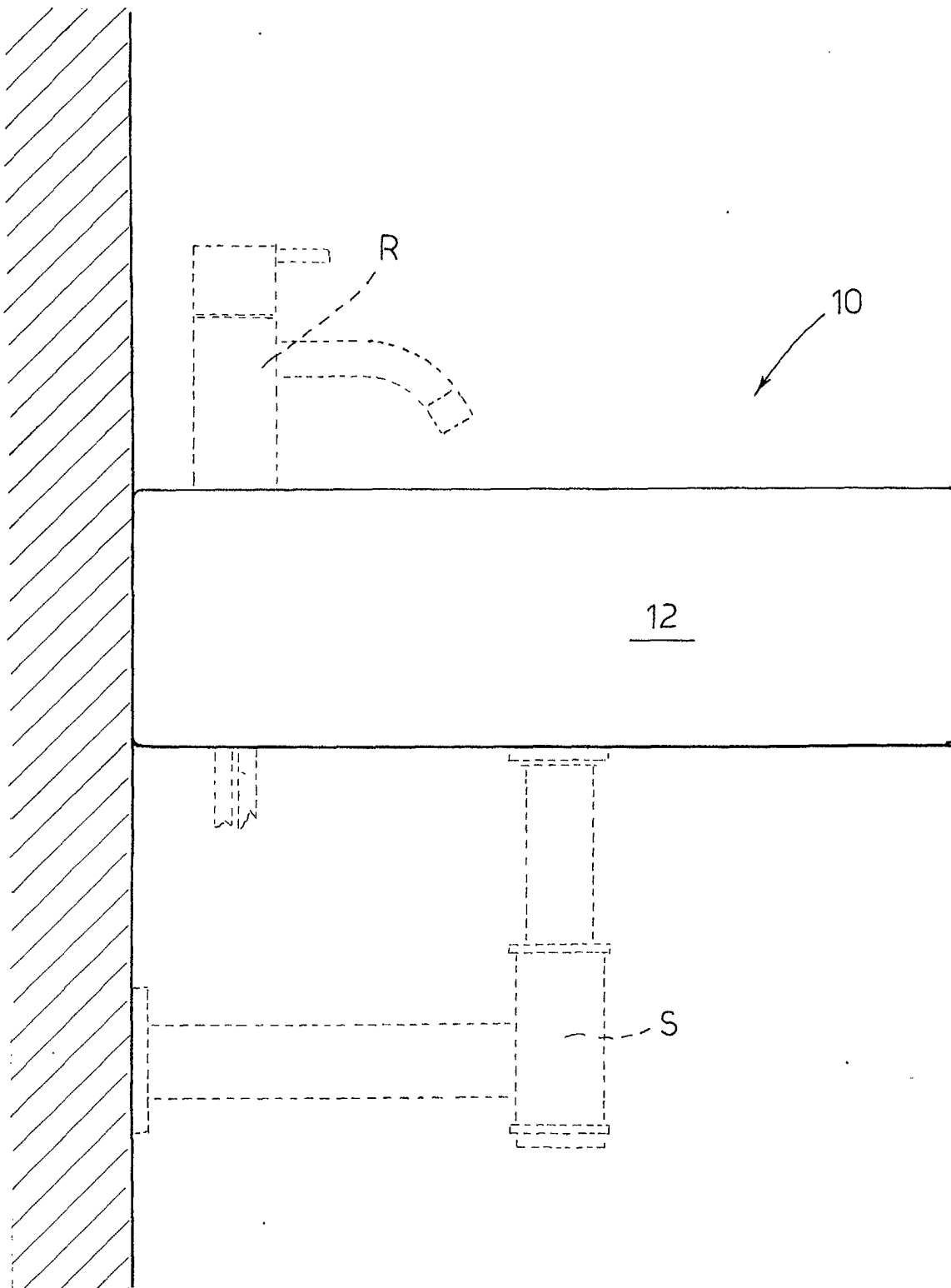


FIG. 1

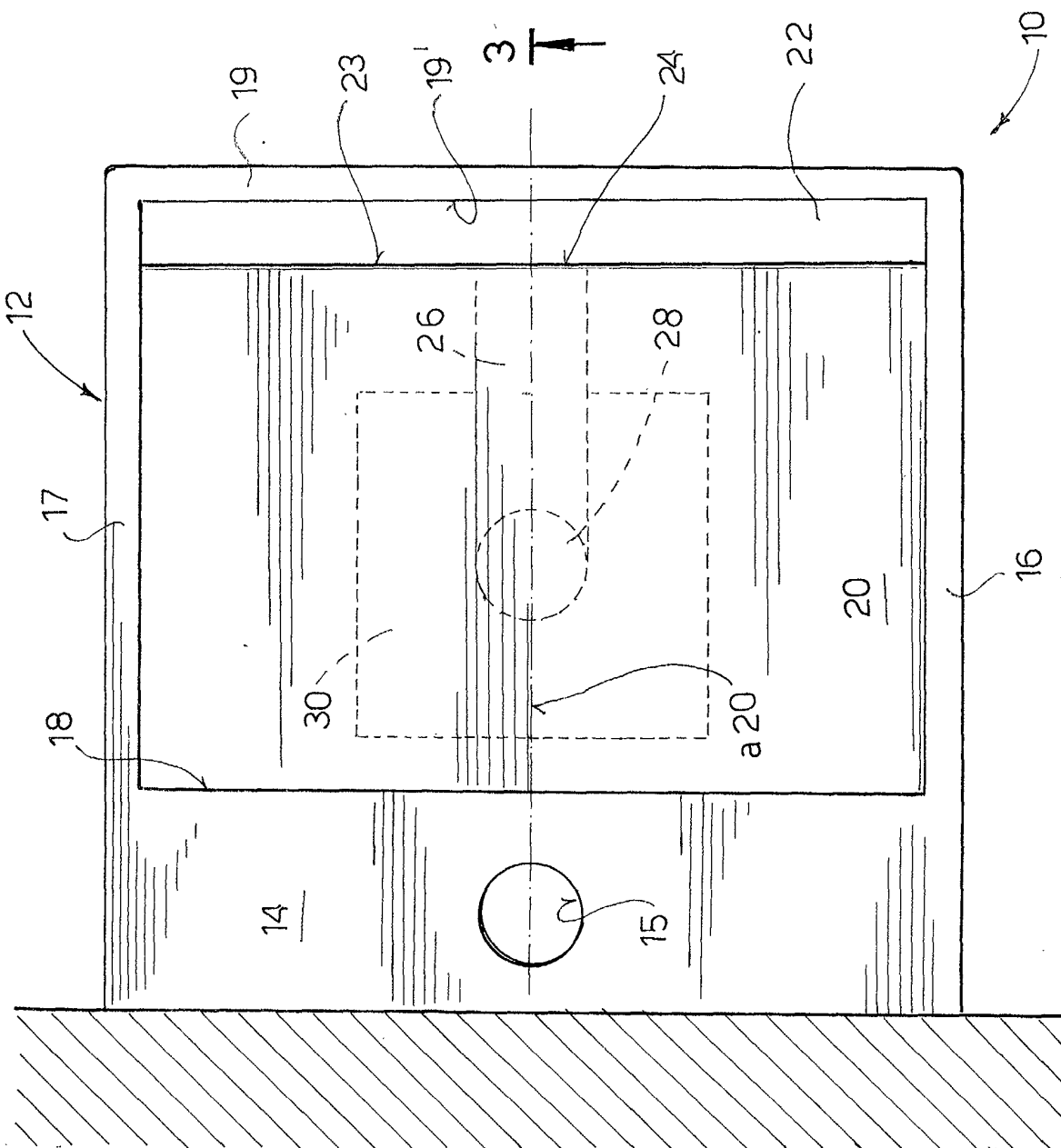


FIG. 2

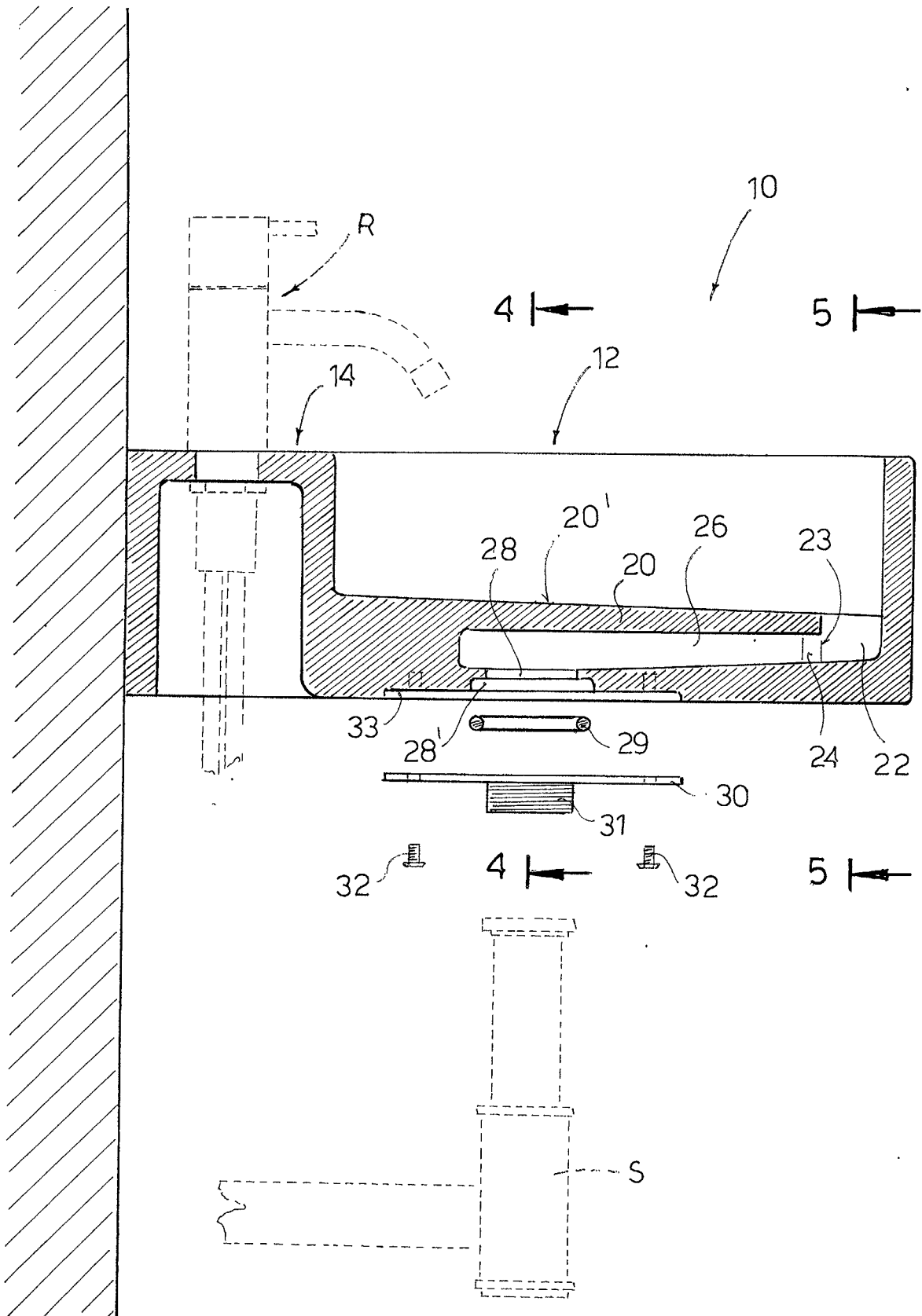


FIG. 4

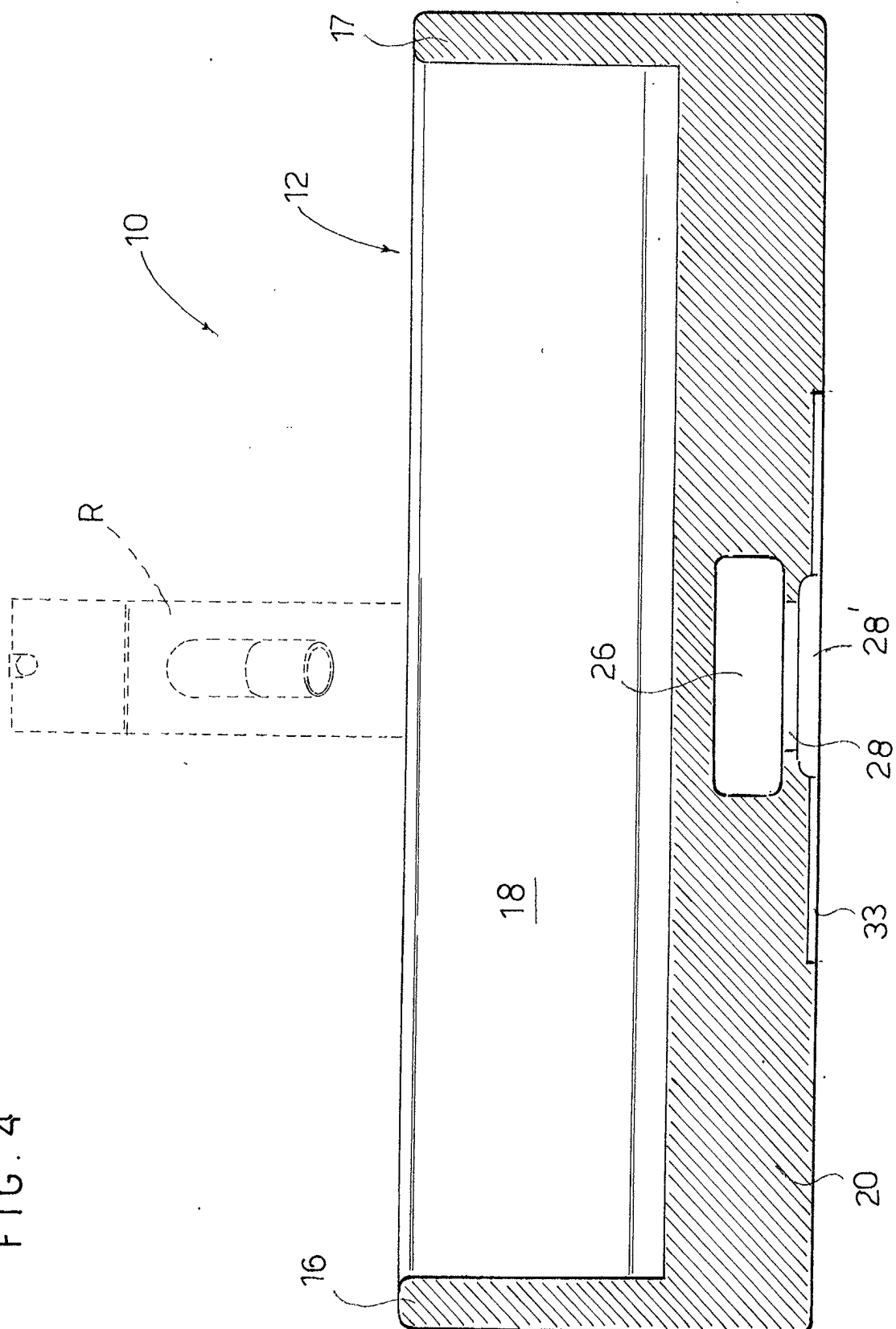
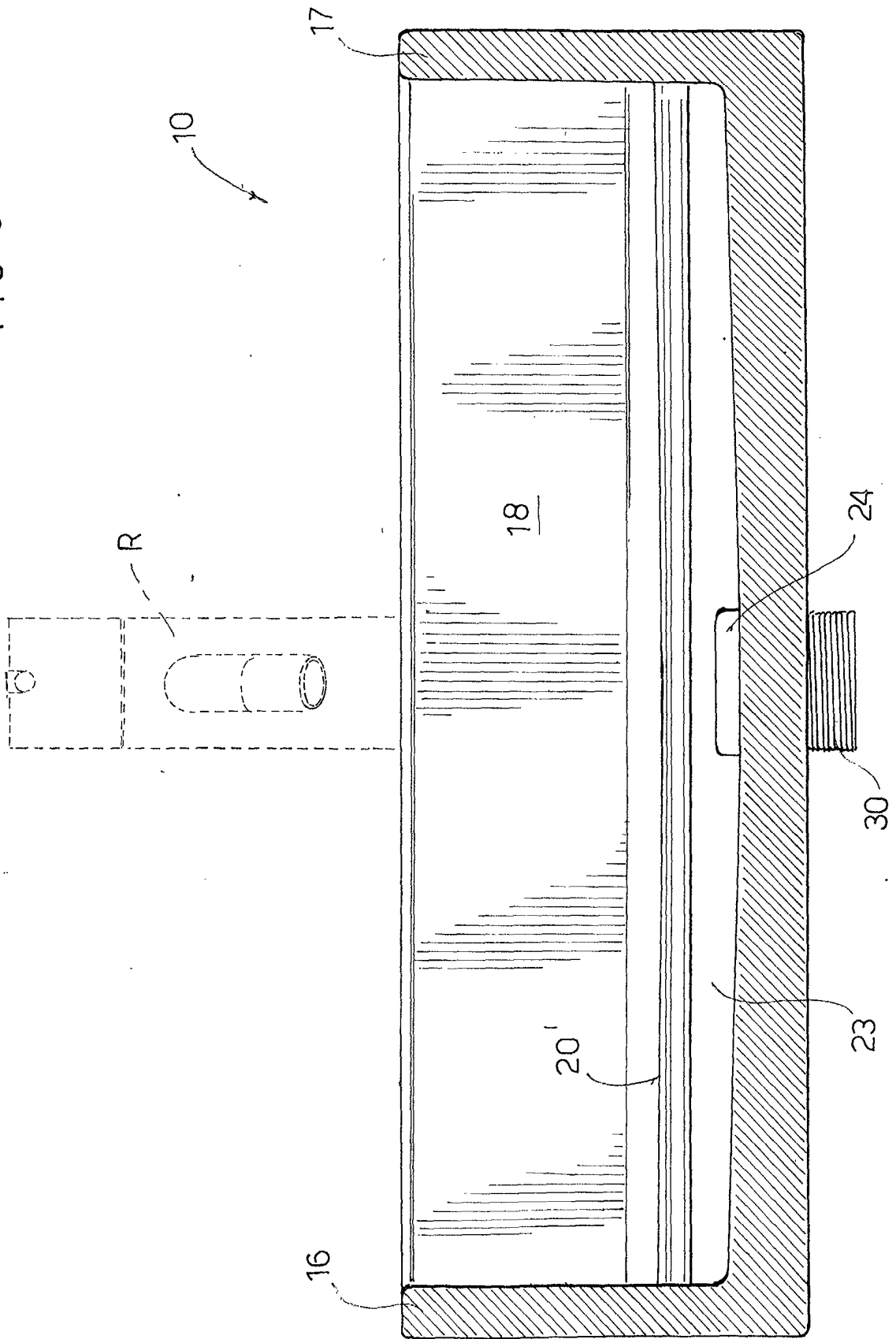


FIG. 5



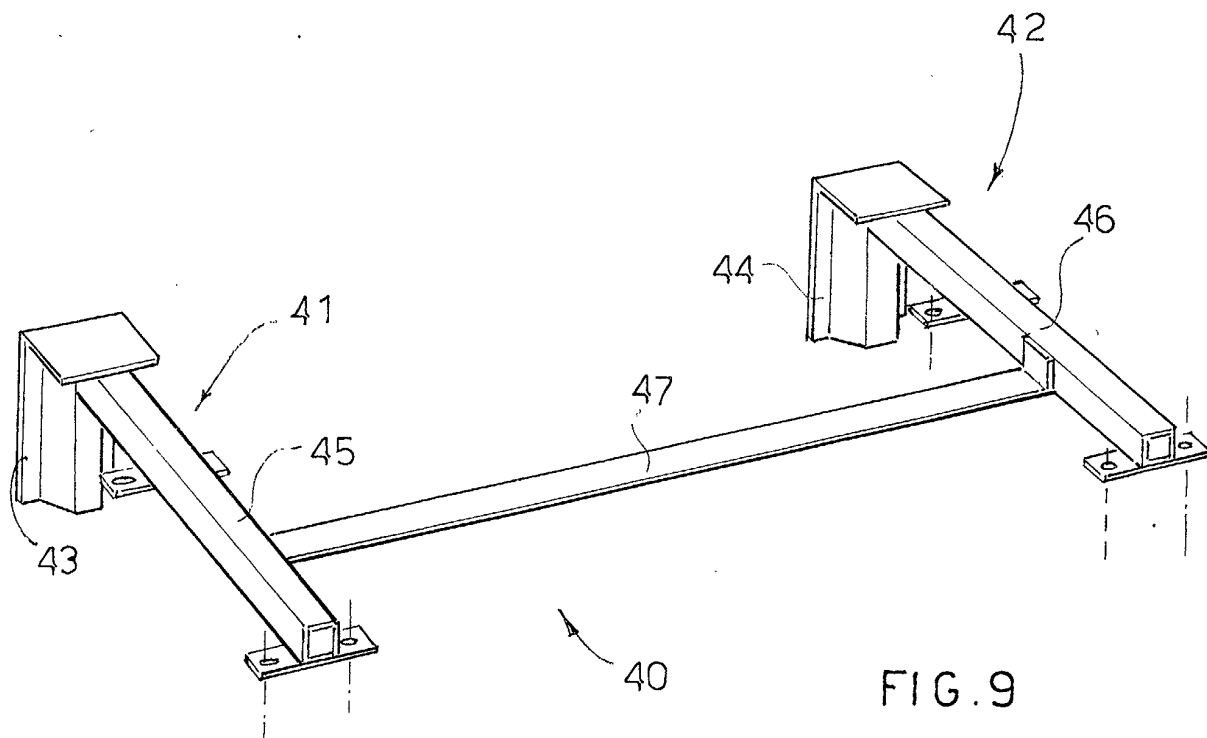
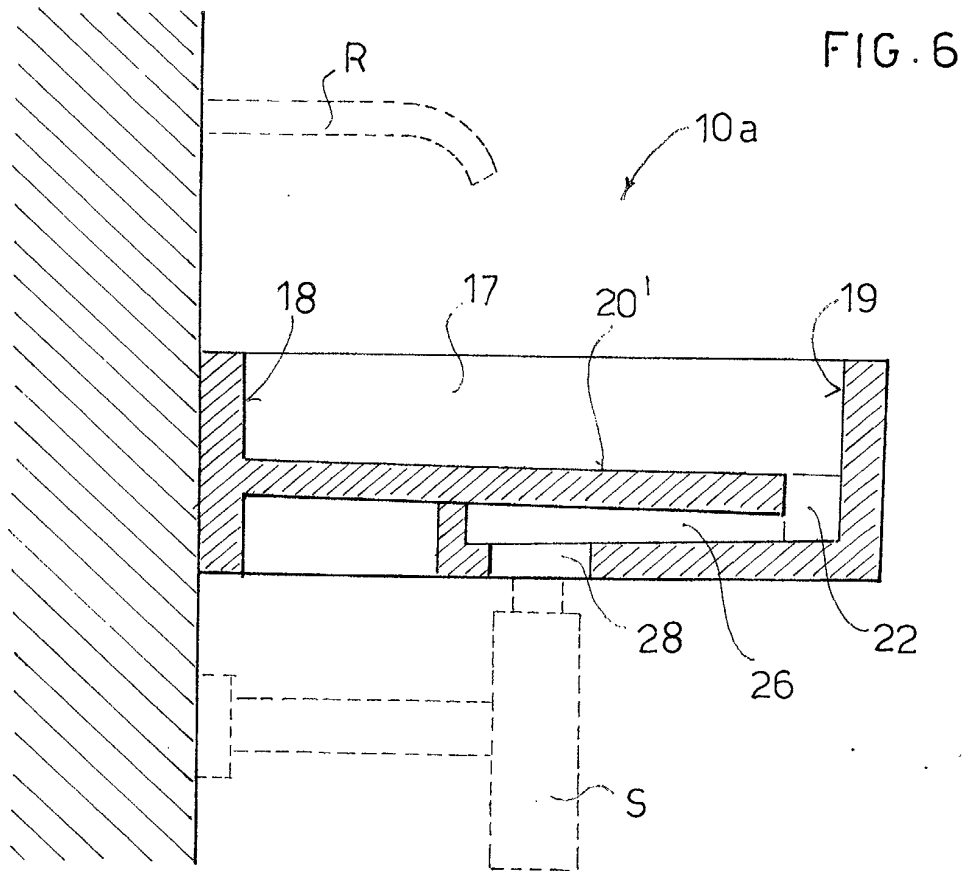


FIG. 6A

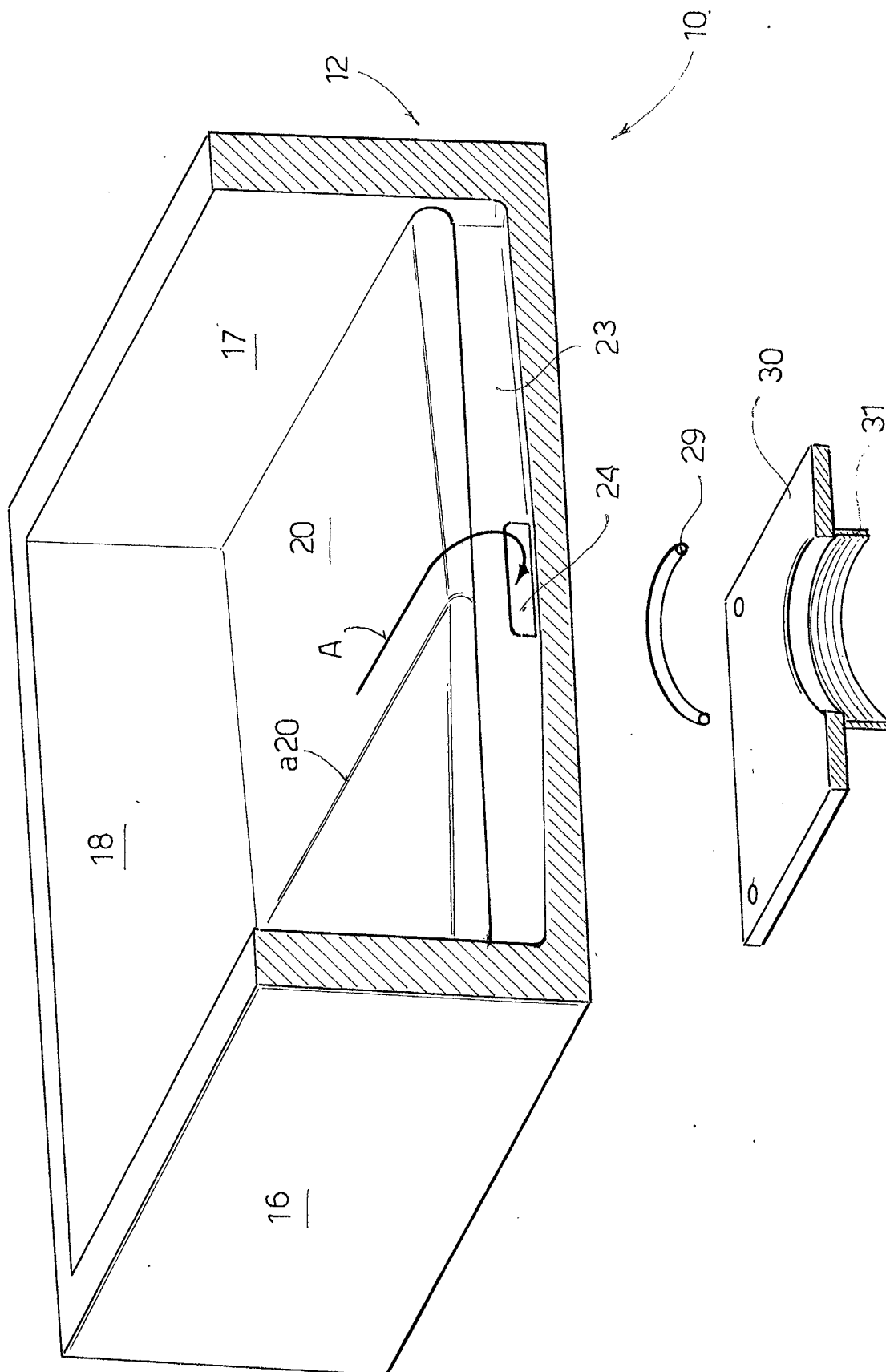


FIG. 7

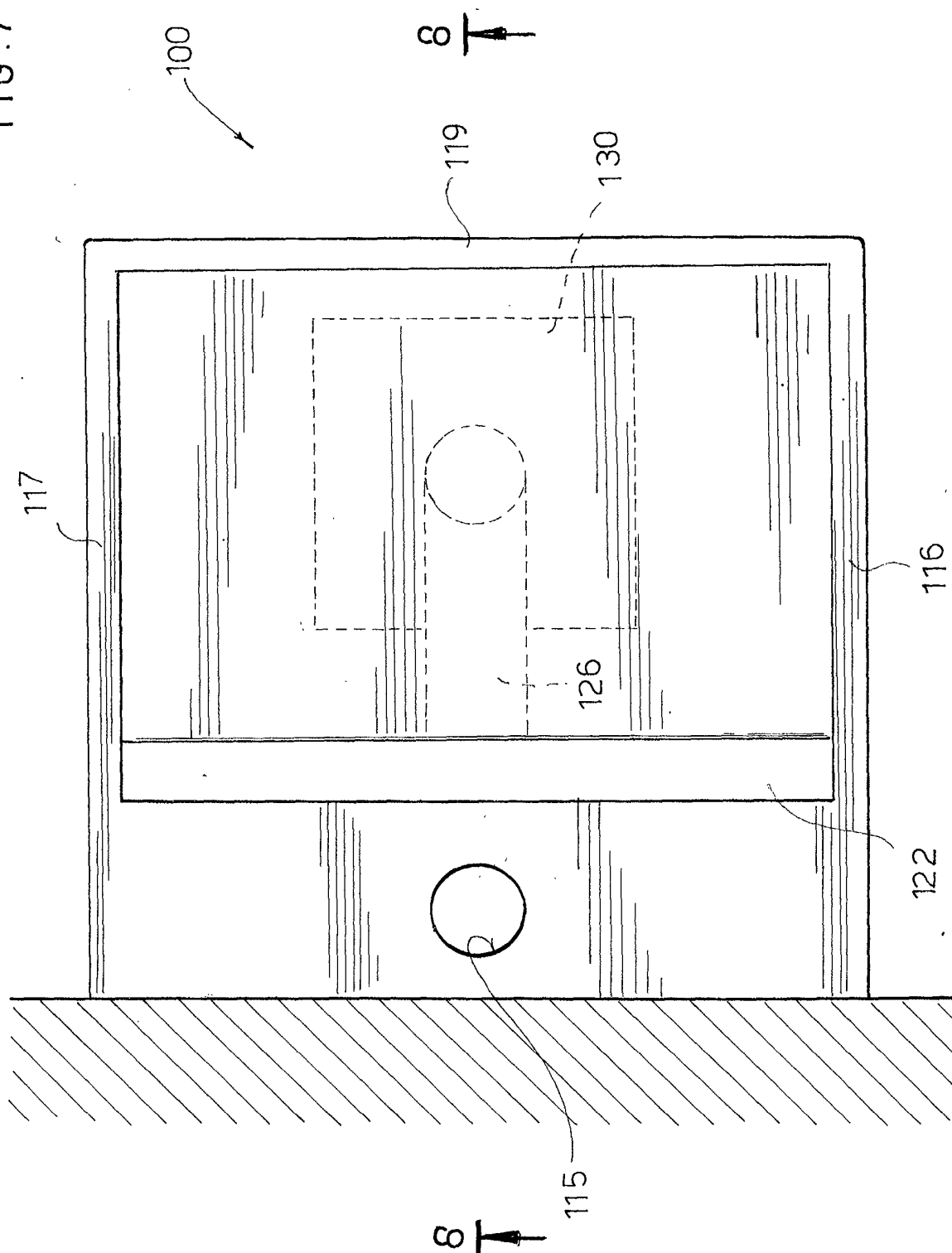
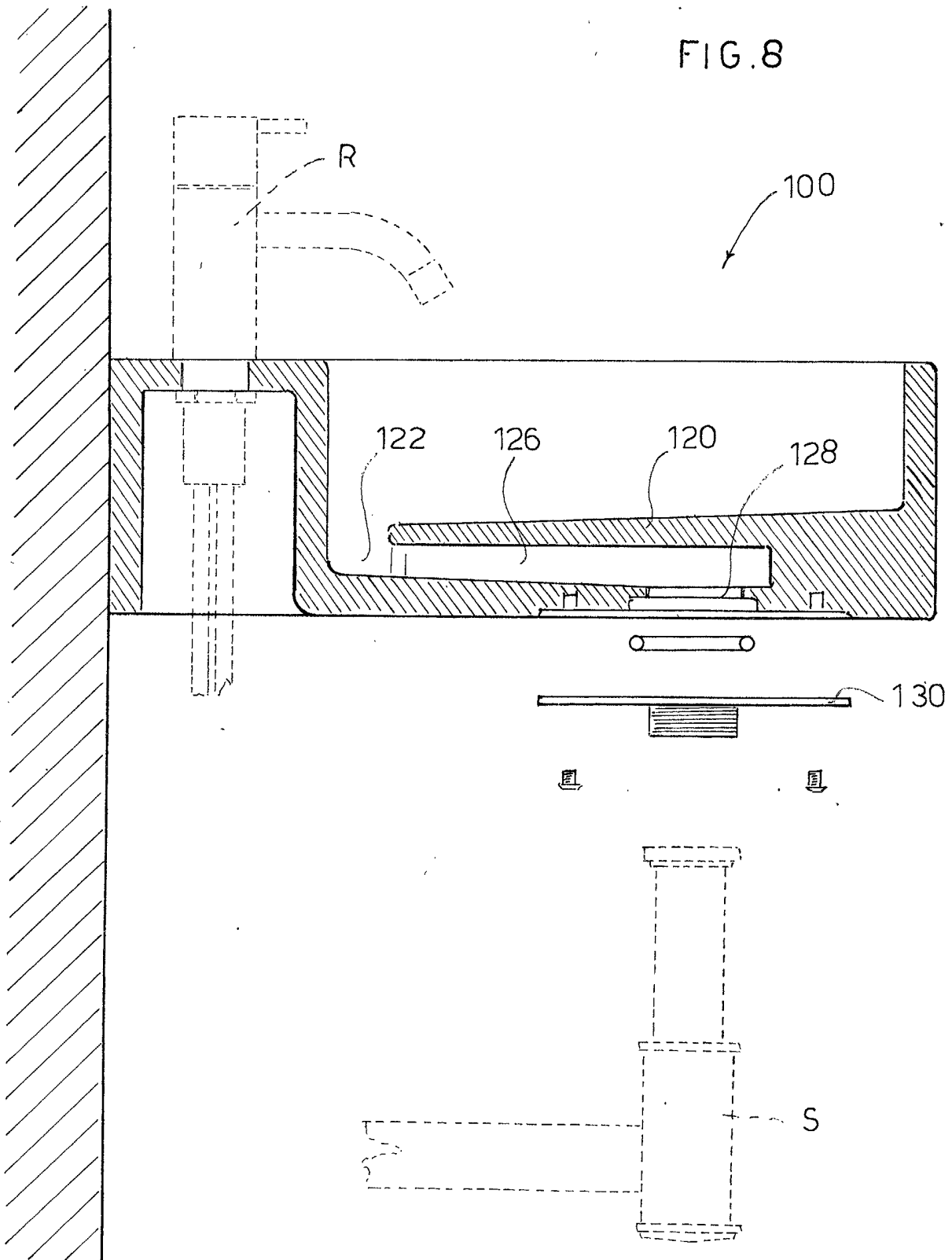


FIG. 8





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EUROPEAN SEARCH REPORT

Application Number
EP 02 42 5338

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	DE 296 03 146 U (ELBL GUENTER DIPL DESIGNER FH) 11 April 1996 (1996-04-11) * page 4, line 14 - page 5, line 13; figures 1,2,4 *	1-3,5-7	E03C1/18 E03C1/14
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A	DE 43 12 575 A (NOKEL JOERG) 20 October 1994 (1994-10-20) * the whole document *	1	
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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 24 September 2002	Examiner Flygare, E
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 02 42 5338

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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