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(54) **A trap assembly and a lavatory comprising said trap assembly**

(57) The inventive trap assembly (1) comprises at least one body (2), which is positioned below the lavatory (L) waste water drain hole (B), is connected to the sanitary pipe inlet, and has at least one connection space (5); at least one sealing member (3) which is placed between the body (2) and the lavatory (L); at least one filter (4), which is positioned above the lavatory (L) waste water drain hole (B), and has at least one connection space (51); at least one connection member (6) which enables connection of the filter (4) to the lavatory (L); at least one adapter (9) placed on the connection member (6); and at least one cover (13) which is fixed to the adapter (9) leaving an adequate space between itself and the filter (4) for the waste water to pass through.

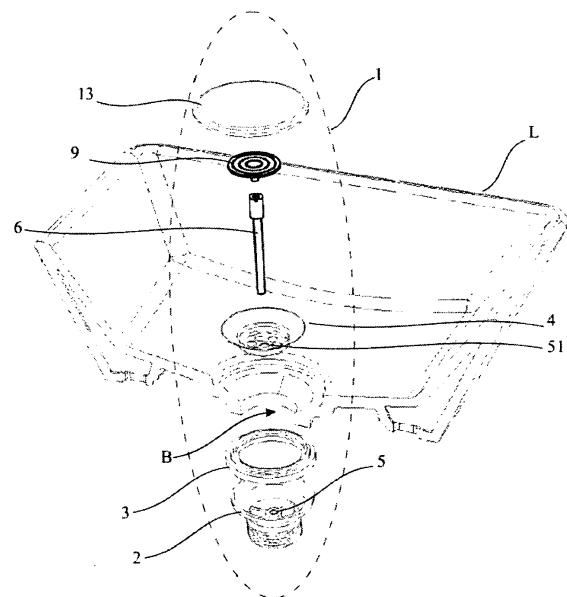


Figure 1

EP 2 412 878 A1

Description

[0009] The components in the figures are each given a reference numeral as follows:

Field of the Invention

[0001] The present invention relates to a trap assembly used in lavatories (sinks).

1. Trap assembly

2. Body

Background of the Invention

3. Sealing member

[0002] Lavatory trap assemblies are used for discharging the waste water and isolating the installation gases from the environment. Trap assemblies start with a filter at the valve area and extend towards the inlet of the sanitary pipe line.

10 4. Filter

5. ,51. Connection space

6. ,61. Connection member

[0003] A cover serving as a filter is disposed at the filter parts of the lavatories for preventing entrance of foreign matters into the sanitary pipe inlet and clogging of the trap assembly. While the said cover may be free on the filter, it may also be used together with the faucet.

15 7. Slot

8. Connection hole

[0004] The United States patent document no. US6341391 discloses a hidden drain outlet structure for sinks. The said structure comprises a drain pipe, a drain head screwed to the drain pipe by a connection bolt and a filter attached to the drain head. The filter that is used prevents intrusion of pieces into the drain line.

20 9. Adapter

10. Plate

11. Protrusion

[0005] The United States patent document no. US2008282466 discloses a waste water pipe plug and a trap assembly for bathrooms and sinks. In the said invention, the trap assembly has a sealable structure, and it can be moved between the sealing position at which it is closed and the drainage position at which it is open.

25 12. Channel

13. Cover

30 14. Space

Summary of the Invention

[0010] The inventive trap assembly (1) essentially comprises

[0006] The objective of the present invention is to realize a trap assembly wherein a cover may be mounted on the filter.

35 - at least one body (2), which is positioned below the lavatory (L) waste water drain hole (B), is connected to the sanitary pipe inlet and has at least one connection space (5),

[0007] Another objective of the invention is to realize a trap assembly that is used together with a ceramic trap cover.

40 - at least one sealing member (3) which is placed between the body (2) and the lavatory (L),
- at least one filter (4), which is positioned above the lavatory (L) waste water drain hole (B), and has at least one connection space (51),

Detailed Description of the Invention

[0008] A trap assembly realized to fulfill the objective of the present invention is illustrated in the accompanying figures wherein,

45 - at least one connection member (6) which enables connection of the filter (4) to the lavatory (L),
- at least one adapter (9) placed on the connection member (6) and

Figure 1 is the exploded perspective view of the inventive trap assembly on the lavatory.

50 - at least one cover (13) which is fixed to the adapter (9) by leaving an adequate space between itself and the filter (4) for the waste water to pass through.

Figure 2 is the sectional view of the inventive trap assembly on the lavatory.

Figure 3 is the sectional view of the connection member.

55 **[0011]** The body (2) is fixed to the lavatory (L) by means of the connection member (6) which is passed through both the connection space (5) provided on the body (2) and the connection space (51) provided on the filter (4). There is provided a sealing member (3) between the body (2) and the lavatory (L) which prevents waste water from the lavatory (L) from going out of the body (2). Preferably

Figure 4 is the perspective view of the adapter.

a gasket is used as the sealing member (3).

[0012] There are holes provided on the filter (4) which enable passage of the waste water to the body (2). The connection space (51) is located in the center of the filter (4), concentric with the connection space (5) provided on the body (2). The body (2) and the filter (4) are fixed on the lavatory (L) by means of the connection member (6) passed through the concentric connection spaces (5, 51).

[0013] The connection member (6) comprises

- at least one slot (7) on which the adapter (9) is disposed,
- at least one connection hole (8) and
- at least one connection member (61) which fixes the adapter (9) on the filter (4) upon being passed through the hole (8).

[0014] When the connection member (6) is fixed to the body (2) via the filter (4), the body (2), the sealing member (3) and the filter (4) are fixed along the same axis.

[0015] The adapter (9) comprises

- at least one plate (10) which the cover (13) contacts,
- at least one protrusion (11), which is located on the surface of the plate (10) facing the filter (4) and is fitted into the slot (7), and
- at least one channel (12), which is located on the surface of the plate (10) not facing the filter (4), and which enables the cover (13) to be fastened to the adapter (9).

[0016] In the preferred embodiment of the invention, the plate (10) is preferably circular. The protrusion (11) is preferably located in the center of the surface of the plate (10) facing the filter (4).

[0017] The protrusion (11) is fitted into the slot (7) to enable the adapter (9) to be fixed onto the filter (4). Upon fitting the protrusion (11) into the slot (7), the protrusion (11) is tightened by the connection member (61) that is passed through the hole (8), and the cover (13) is prevented from accidentally coming off from the filter (4) due to coming off of the protrusion (11) from the slot (7).

[0018] The channel (12), which is located on the surface of the plate (10) not facing the filter (4), is preferably circular. In the preferred embodiment of the invention, there are three channels (12) on the plate (10) whose diameters decrease towards the center of the plate (10). Connection of the cover (13) to the adapter (9) is strengthened by increasing the number of channels (12).

[0019] On the surface of the cover (13) that is connected to the adapter (9), there is provided a space (14) which corresponds to the adapter (9) plate (10) and which is big enough for the plate (10) to fit therein.

[0020] In the preferred embodiment of the invention, the cover (13) is fixed to the adapter (9) by adhesion method.

[0021] In the preferred embodiment of the invention, the cover (13) is ceramic.

[0022] In the inventive trap assembly (1), firstly the body (2) is fastened to the lower part of the waste water drain hole (B) such that there will be the sealing member (3) between the body (2) and the lavatory (L), and after the filter (4) is arranged at the upper part of the same hole (B), the two parts (2, 4) are fixed by means of a connection member (6). After the said fixing, the cover (13) is secured onto the adapter (9) and fitted into the slot (7) via the protrusion (11). By fitting the cover (13) on the filter (4), a space is formed which will allow the waste water to pass through the filter (4) and into the sanitary pipe inlet.

[0023] Within the framework of this basic concept, it is possible to develop various embodiments of the inventive trap assembly (1). The invention can not be limited to the examples described herein and it is essentially according to the claims.

Claims

1. A trap assembly (1) comprising

- at least one body (2), which is positioned below the lavatory (L) waste water drain hole (B), is connected to the sanitary pipe inlet, and has at least one connection space (5),
- at least one sealing member (3) which is placed between the body (2) and the lavatory (L),
- at least one filter (4), which is positioned above the lavatory (L) waste water drain hole (B), and has at least one connection space (51),
- at least one connection member (6) which enables connection of the filter (4) to the lavatory (L),
- at least one adapter (9) placed on the connection member (6) and
- at least one cover (13) which is fixed to the adapter (9) by leaving an adequate space between itself and the filter (4) for the waste water to pass through,

and **characterized by** at least one connection member (6) having

- at least one slot (7) on which the adapter (9) is disposed,
- at least one connection hole (8) and
- at least one connection member (61) which fixes the adapter (9) on the filter (4) upon being passed through the hole (8).

2. A trap assembly (1) according to Claim 1, **characterized by** an adapter (9) comprising

- at least one plate (10) which the cover (13) contacts,
- at least one protrusion (11), which is located

on the surface of the plate (10) facing the filter (4) and is fitted into the slot (7), and
 - at least one channel (12), which is located on the surface of the plate (10) not facing the filter (4), and which enables the cover (13) to be fastened to the adapter (9). 5

3. A trap assembly (1) according to Claim 2, **characterized by** a plate (10) which is circular. 10
4. A trap assembly (1) according to any of Claims 2 to 3, **characterized by** the protrusion (11) which is located in the center of the surface of the plate (10) facing the filter (4). 15
5. A trap assembly (1) according to any of Claims 2 to 4, **characterized by** the protrusion (11) which, upon being fitted into the slot (7), is tightened by the connection member (61) that is passed through the hole (8) and enables to prevent the cover (13) from accidentally coming off from the filter (4). 20
6. A trap assembly (1) according to any of Claims 2 to 5, **characterized by** a channel (12) which is circular. 25
7. A trap assembly (6) according to Claim 1, **characterized by** three channels (12) whose diameters decrease towards the center of the plate (10).
8. A trap assembly (1) according to any of the preceding claims, **characterized by** a space (14) on the surface of the cover (13) that is connected to the adapter (9), which space (14) corresponds to the adapter (9) plate (10) and is big enough for the plate (10) to fit therein. 30
35
9. A trap assembly (1) according to Claim 8, **characterized by** a cover (13) fixed to the adapter (9) by adhesion method. 40
10. A trap assembly (1) according to Claim 9, **characterized by** a cover (13) which is ceramic.
11. A lavatory (L) **characterized by** a trap assembly (1) according to any of the preceding claims. 45

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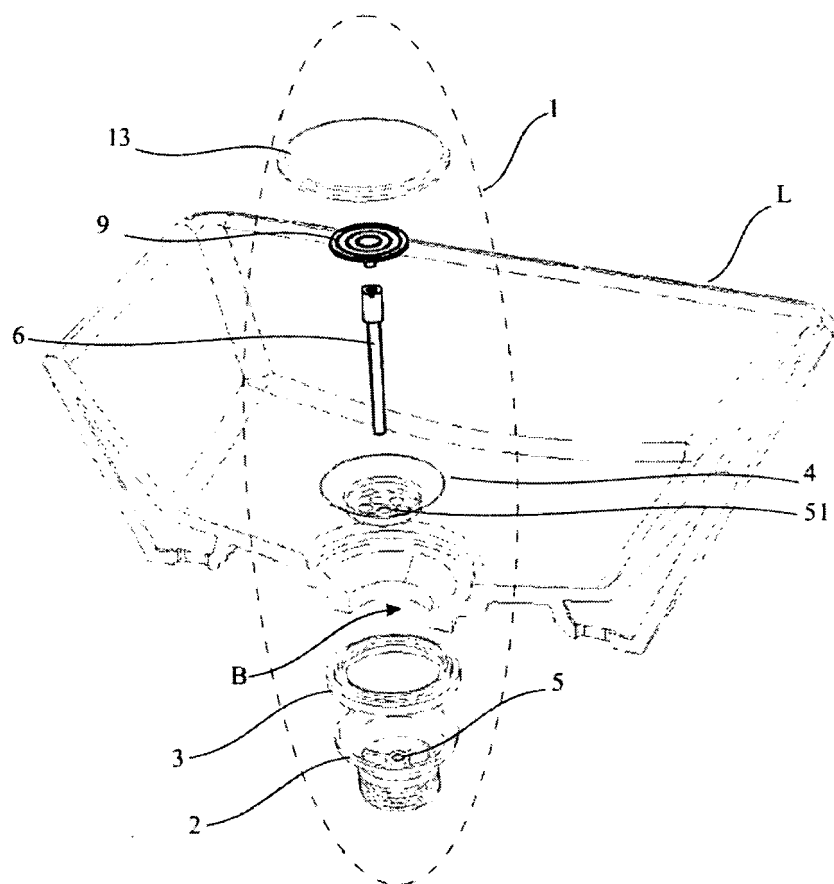


Figure 1

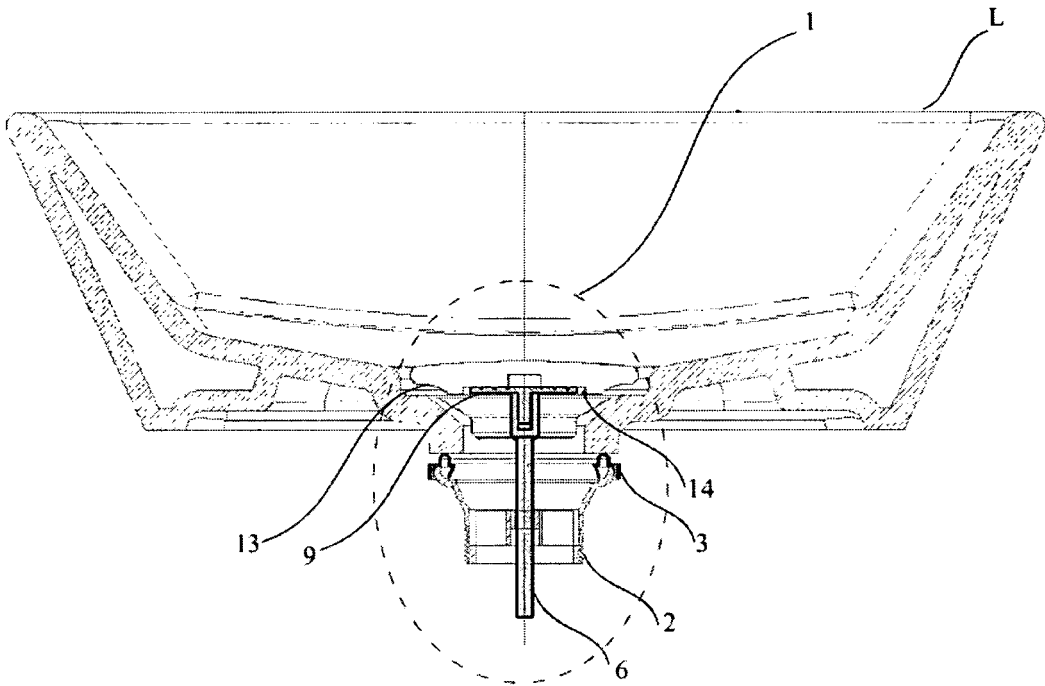


Figure 2

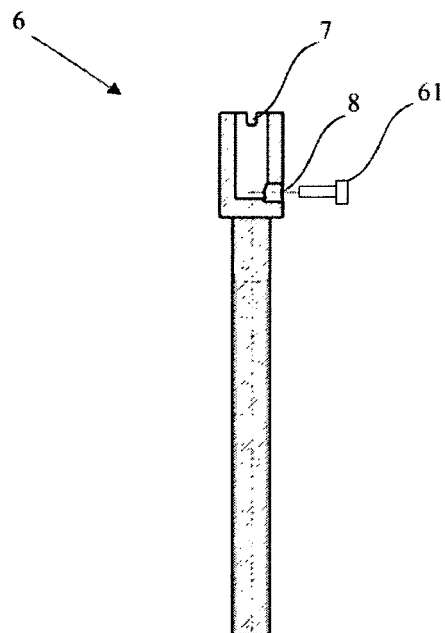


Figure 3

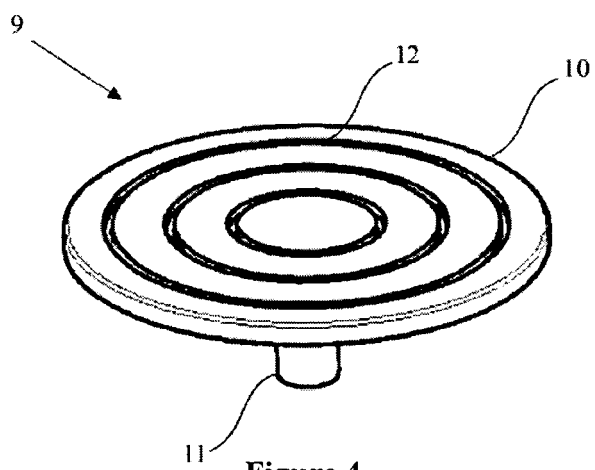


Figure 4



EUROPEAN SEARCH REPORT

Application Number
EP 10 19 0069

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 7 032 254 B1 (DONG WEILONG [CN] ET AL) 25 April 2006 (2006-04-25)	1,11	INV. E03C1/26
Y	* figures 1,3,4,6,8-18 *	8-10	E03C1/23
A	* column 1, line 7 - line 14 * * column 4, line 20 - line 25 *	2-5	E03C1/262 A47K1/14
Y	US 4 825 477 A (ARANDA JOHN P [US]) 2 May 1989 (1989-05-02)	8-10	
A	* figures 1-3 *	2-6	
A	DE 20 2004 008540 U1 (ENGEL ROBERT G [DE]) 23 September 2004 (2004-09-23) * figures 1,3 *	1	
A	US 6 108 828 A (CHENG JIP [US]) 29 August 2000 (2000-08-29) * figures 2,3,8 *	1	
A	GB 1 072 840 A (WALTHER LOFFLER) 21 June 1967 (1967-06-21) * figure 1 *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC) E03C A47K
Place of search Munich		Date of completion of the search 24 November 2011	Examiner Isailovski, Marko
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 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 10 19 0069

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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