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(54) **Drainage siphon for drain**

(57) The drainage siphon (5) of the invention comprises a grooved housing (6) fitted to an exit mouth (8) of the drain (2) and, occasionally, to an additional pipe (10) for drainage, that in the current case rests on a lug (9) in order to leave a free passage. The grooved housing (6) advantageously comprises grooves (11) that are open

in their upper part presenting a circular cross-section. If the drain (2) is of the trap type, the groove housing (6) remains located between the mouth (8) and the depressed cavity (12).

Thus it permits the drainage of the water collected by the waterproof fabric (13) arranged perimeter to the drainage siphon (5).

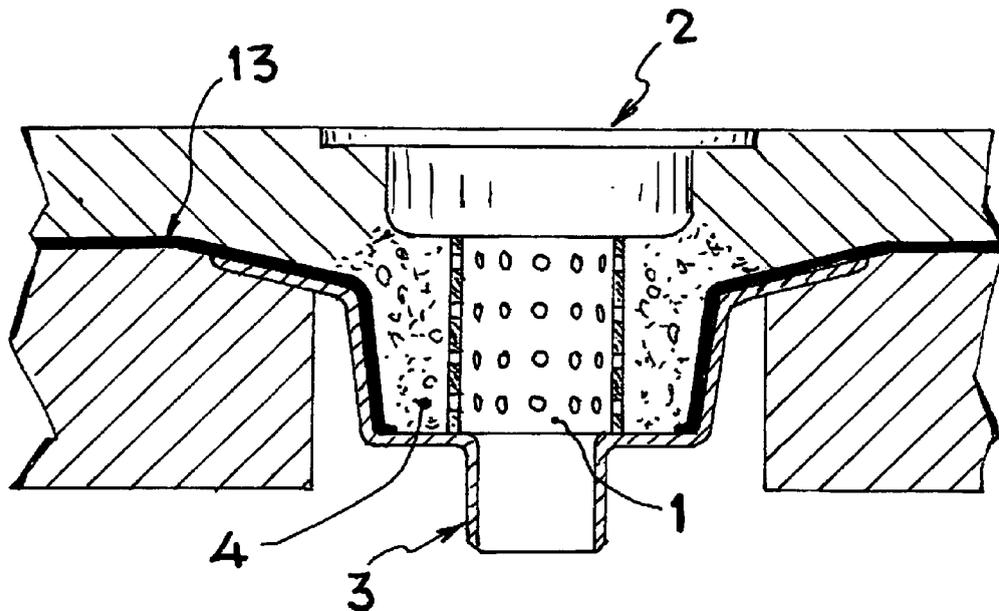


FIG. 1

EP 2 322 725 A1

Description

[0001] The present invention relates to a drainage siphon intended to collect water coming from the overflowing of a drain and water collected by means of waterproof fabric, and to lead them to a drainage pipe. Its field of application is that of auxiliary materials for construction.

[0002] Simple drainage siphons are known consisting of a central body that extends upwards in a perimetric flange and downwards in a central tubular exit intended to be inserted in a drainage pipe. The depth of the central body of the drainage siphon is normally sufficient for partially housing the drain inside itself, which ensures that the water can circulate.

[0003] Nevertheless, the distance between the drain and the drainage siphon can sometimes be such that it becomes necessary to incorporate an appropriate means for ducting the water between the two elements, especially water coming from the overflowing of a drain and water collected by means of the waterproof fabric. The traditional solution consists of constructing a brickwork catchpit. This is slow, expensive and not secure, as well as being subject to deterioration with time. More recently, attempts have been made to replace the catchpit by laying waterproof fabric covered with gravel, with a perforated pipe being provided to prevent the gravel from passing through. This arrangement allows the circulation of the water overflowing from a drain and the water collected by means of the waterproof fabric. This solution is more secure and longer lasting, but it compels the use of a perforated pipe.

[0004] It is consequently an objective of the present invention to provide a drainage siphon capable of receiving water coming from the overflowing of a drain and that collected by means of the waterproof fabric, without using special additional elements.

[0005] In order to achieve the proposed objective, a drainage siphon has been conceived which incorporates a grooved housing in the interior of its central body such that this housing is able to receive a standard drainage pipe inside it, with the latter resting on at least one lug provided on the inner surface of the grooved housing.

[0006] The grooved housing advantageously presents the form of a circular pipe which extends the lower exit of the drainage siphon upwards.

[0007] Such a solution displays clear advantages. So:

- It solves the problem created by an excessive distance between drain and drainage siphon in a way that is economical, secure and lasting.
- For medium distances, it can be used without having to incorporate an additional drainage pipe between drain and drainage siphon, always provided that the height of the grooved housing is sufficient.

[0008] In order to complement the foregoing description, and with the aim of aiding a better understanding of

the characteristics of the invention, a detailed description is going to be given of a preferred embodiment, on the basis of a set of drawings attached to this descriptive specification and in which the following has been represented in an illustrative and non-limiting way.

Figure 1 shows an arrangement according to the prior art, which uses a perforated pipe.

Figure 2 shows the solution proposed in the present invention, when the height of the grooved housing is sufficient so that the additional use of a drainage pipe becomes unnecessary.

Figure 3 shows a cross-section in perspective of the inventive drainage siphon.

Figure 4 shows the solution proposed in the present invention, when an additional drainage pipe needs to be used.

In the above figures, the numerical references correspond to the following parts and elements

1. Perforated pipe.
2. Drain.
3. Conventional drainage siphon.
4. Gravel.
5. Drainage siphon according to the invention.
6. Grooved housing of the drainage siphon.
7. Exit of the drainage siphon.
8. Mouth of the drain.
9. Lug.
10. Additional pipe.
11. Grooves.
12. Depressed cavity.
13. Waterproof fabric.

[0009] In figure 1 a habitual arrangement in the prior art can be seen in which a perforated pipe (1) is inserted between a drain (2) and a conventional drainage siphon (3) in order to prevent the passage of gravel (4) though permitting drainage of the water collected by the waterproof fabric (13).

[0010] Figure 2, on the other hand, represents the drainage siphon (5) of the invention, which incorporates

a grooved housing (6) basically arranged as an extension of an exit (7), and which fits on the outside of the mouth (8) of a drain (2). In this particular case the drain (2) is of the trap type, with just its base having been represented, once the habitual grating and skirting have been removed. The grooved housing (6) thus remains located between the mouth (8) and a depressed cavity (12).

[0011] In figure 3 a perspective view can be seen of the grooved housing (6) of the drainage siphon (5) of the invention, along with a lug (9), intended to support a hypothetical additional pipe (10), as shown in figure 4.

[0012] The functioning of the device as a whole is as follows. Most of the water evacuated via the drain (2) will circulate, either directly or via the additional pipe (10), as far as the drainage siphon (5). For its part, the water that does not reach the drain (2) will be led to a waterproof sheet (13) and, via a gravel fill (4), as far as the grooved housing (6) of the drainage siphon (5), given that the additional pipe (10), when incorporated, rests on the lug (9) and does not completely cover the grooves (11). See figures 2 and 4.

[0013] It will be evident to an expert in the field that there is a series of modifications and alternatives for adapting the invention to the chosen design and the means of production that are available. So, in the preferred embodiment, a single lug (9) has been represented, though a set of lugs could have been used or a perimetric step could even have been used on which the additional pipe would rest (10). Likewise, a grooved housing (6) has been represented in which the grooves (11) are open in their upper part in order to facilitate the stripping of the drainage siphon (5) from its mould. It is evident that the shape and arrangement of the grooves (91) is irrelevant for the functionality of the invention. In the context of this document, grooved housing (6) will be understood as being any device with openings to permit the passage of water but not of gravel (4) through it.

Claims

1. Improved drainage siphon (5) for drain (2), **characterized by** comprising a grooved housing (6) fitted to an exit mouth (8) of the drain (2) and, occasionally, to an additional pipe (10) for drainage, and a lug (9) provided so that the additional pipe (10) can rest on it, as the case might be.
2. Improved drainage siphon (5) for drain (2), according to claim 1, **characterized in that** the grooved housing (6) comprises grooves (11) that are open in their upper part.
3. Improved drainage siphon (5) for drain (2), according to claim 2, **characterized in that** the grooved housing (6) presents a circular cross-section,

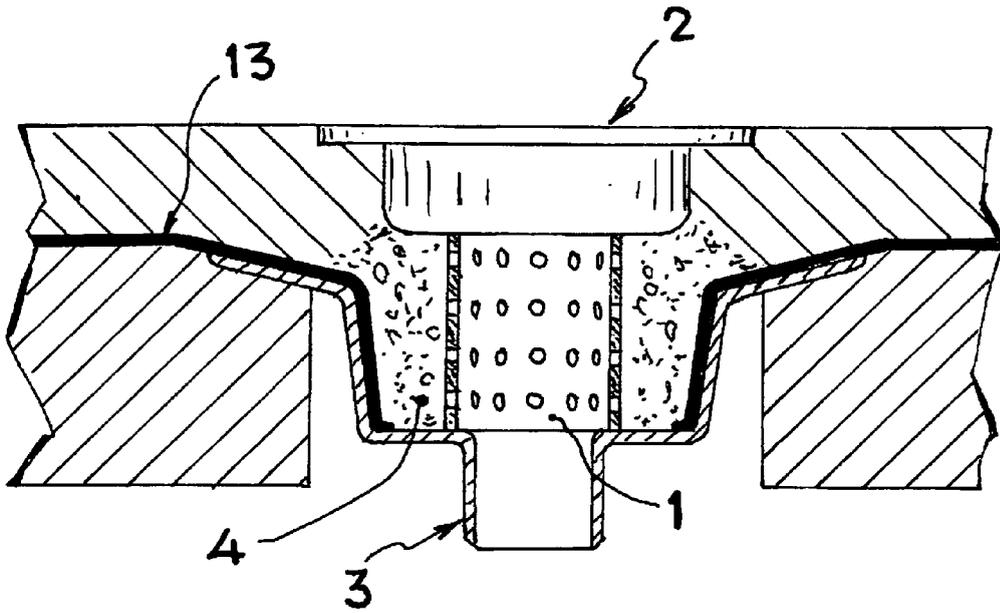


FIG. 1

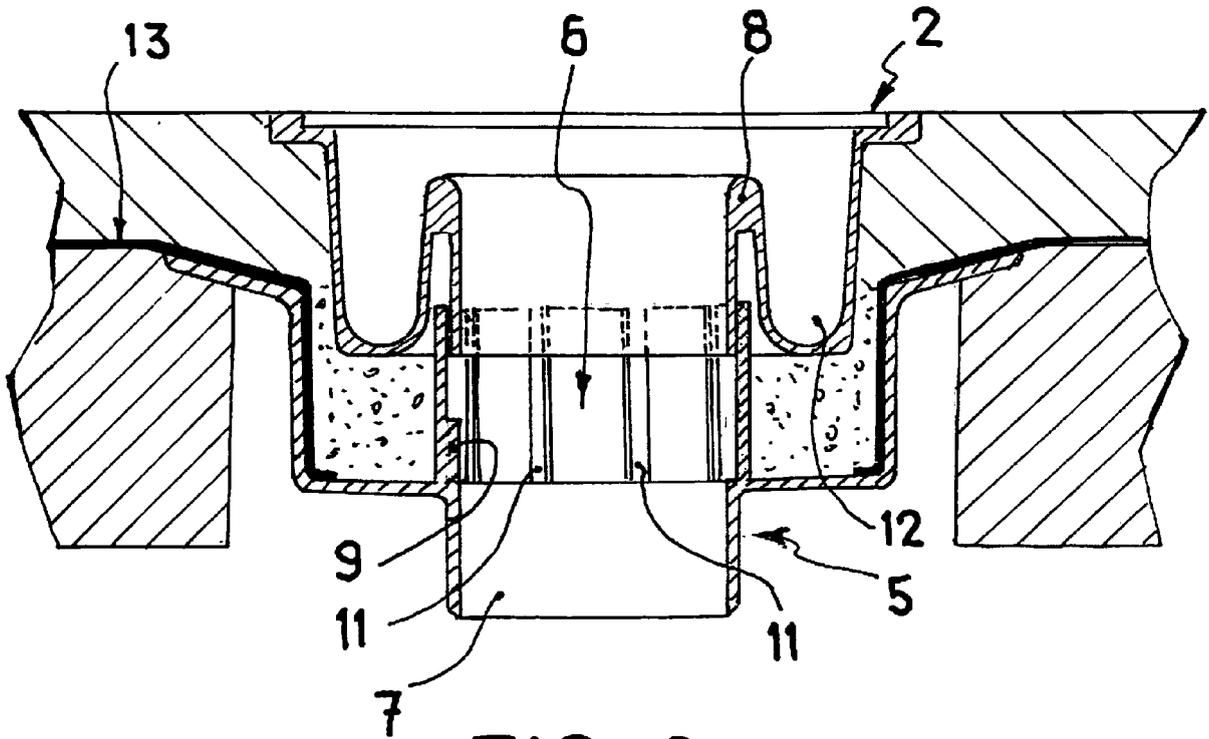


FIG. 2

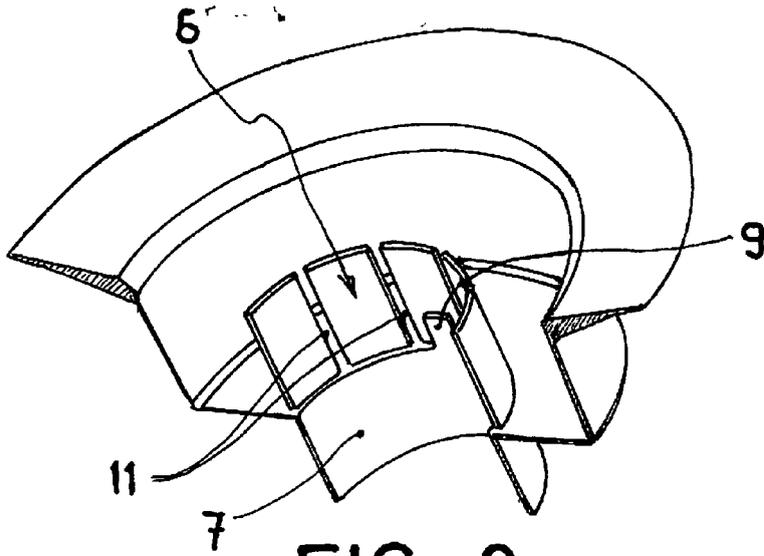


FIG. 3

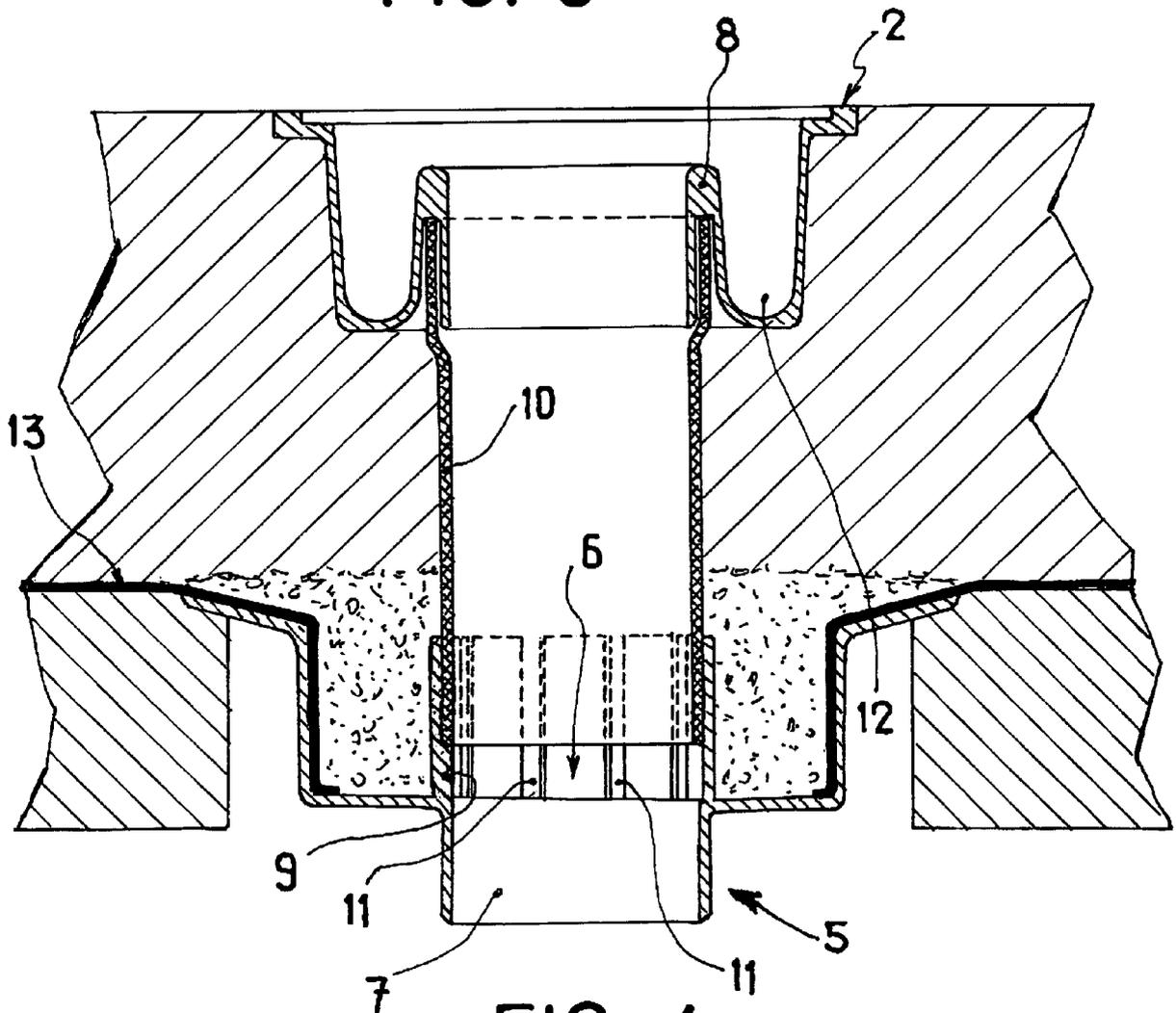


FIG. 4



EUROPEAN SEARCH REPORT

Application Number
EP 10 01 4443

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 2002/136604 A1 (SONDRUP CHRIS [US]) 26 September 2002 (2002-09-26) * paragraph [0027] - paragraph [0053]; figures 3,4 *	1-3	INV. E02D29/14 E03F5/06
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			E02D E03F
Place of search		Date of completion of the search	Examiner
Munich		9 March 2011	Geiger, Harald
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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 (P04/C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 10 01 4443

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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

09-03-2011

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82