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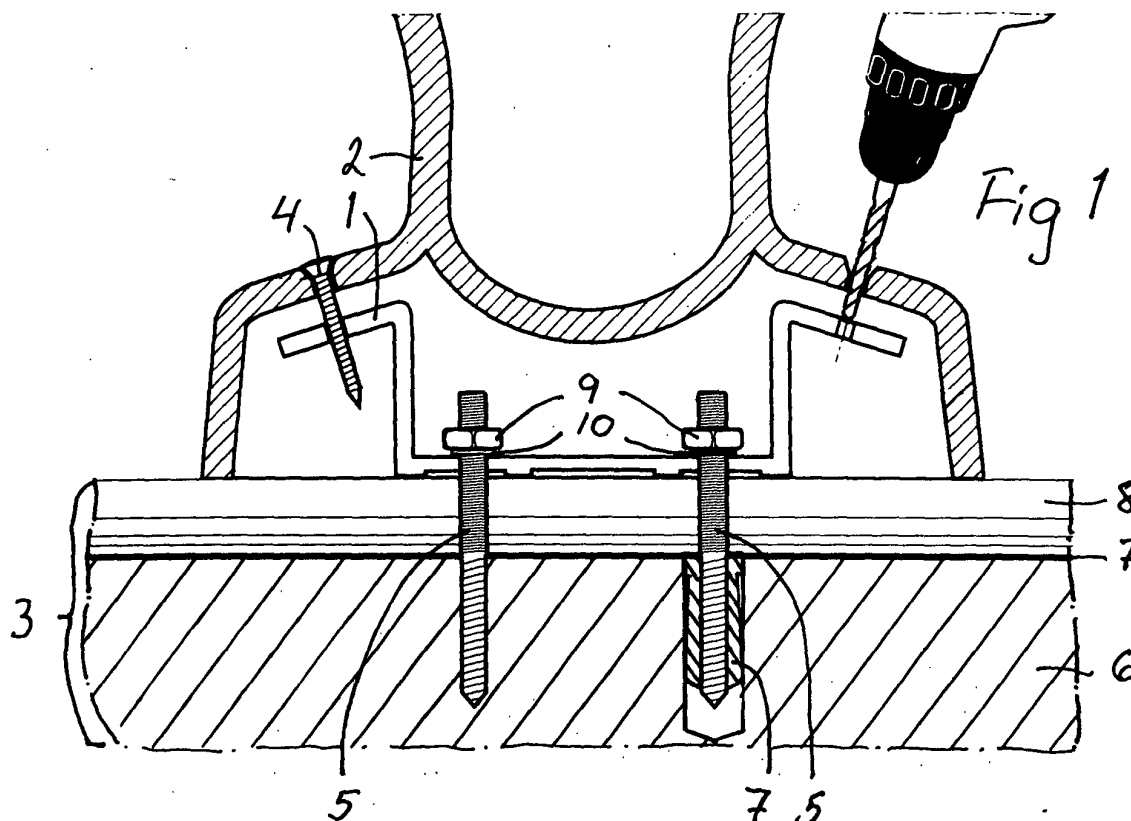
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(54) **A method and mounting assembly for mounting a toilet to a floor**

(57) A method for mounting a toilet (2) or the like to a floor (3) by means of a floor attachment (1) fastened to the floor by means of screws (5) comprises the steps of

a) attaching stud screws (5) to a subfloor (6),

b) providing the subfloor with a waterproofing layer (7) sealing against the stud screws,  
c) laying a flooring (8) above the waterproofing layer, and  
d) fastening the floor attachment (1) to the stud screws above the flooring by means of nuts (9).



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## Description

### Technical Field

[0001] The present invention relates to a method for mounting a toilet or the like to a floor by means of a floor attachment fastened to the floor by means of screws. It also relates to a mounting assembly for carrying out this method.

### Background of the Invention

[0002] Conventionally, a toilet is mounted to a floor by means of screws in pre-made holes in the bottom bead of the toilet bowl. These screws will penetrate the waterproofing or insulating layer required to be provided between the subfloor and the flooring material, so that certain access for water is permitted past the waterproofing layer, which can lead to serious water damage.

[0003] More recently, use has been made of a separate floor attachment, which is fastened to the floor by means of screws after the flooring material has been laid. The toilet bowl is then attached to the floor attachment by means of screws. Also in this case the screws for fastening the floor attachment will allow access of water past the waterproofing layer, and no real improvement in this respect is obtained.

[0004] There is accordingly a strong need to obtain a toilet mounting, which causes no damage to the waterproofing layer in the floor while providing an equally strong and releasable mounting as previously.

### The Invention

[0005] This is according to the invention obtained by

- a) attaching stud screws to a subfloor,
- b) providing the subfloor with a waterproofing layer sealing against the stud screws,
- c) laying a flooring above the waterproofing layer, and
- d) fastening the floor attachment to the stud screws above the flooring by means of nuts.

[0006] In this way the subfloor is provided with the waterproofing layer after the stud screws have been attached, which means that a full sealing also at the screws can be guaranteed.

### The Drawing

[0007] The invention will be further described below under reference to the accompanying drawing, in which

Fig 1 is an illustration, mainly in section, of the mounting of a water toilet to a floor, and  
Fig 2 is a perspective illustration of the fastening of a floor attachment to the floor.

## Detailed Description of the Invention

[0008] As is known, a floor attachment 1 may be utilized for fastening a toilet, illustrated in Fig 1 by its bowl 2, to a floor 3. This attachment is conventionally mounted to the floor by screws, if necessary screwed down into plugs in pre-drilled holes. The bowl 2 is placed in correct position over the attachment 1, holes are drilled in the attachment flanges, as is illustrated to the right in Fig 1, and the bowl is attached to the attachment 1 by means of screws 4 through holes present in a bottom bead of the bowl, as is illustrated to the left in Fig 1.

[0009] The invention is concerned with the fastening of the floor attachment 1 to the floor 3 in a completely watertight fashion. For this purpose stud screws 5 are used in the following way:

[0010] The stud screws 5 are attached to the subfloor 6, either by simply screwing down the stud screws, if the subfloor is for example of wood (as is shown to the left in Fig 1), or by pre-drilling holes and providing plugs 7 in these holes before screwing down the stud screws, if the subfloor is for example of concrete (as is shown to the right in Fig 1).

[0011] When the stud screws 5 are firmly attached to the subfloor 6, the latter is provided with a waterproofing or insulating layer 7, and it is hereby insured that full sealing against the stud screws 5 is obtained.

[0012] A flooring 8 (for example floor tiles) is then provided above the waterproofing layer 7. As is indicated in Fig 1, the flooring may be built up of several layers, of which one may be glue.

[0013] When the flooring 8 is laid, the floor attachment 1 is placed over the fixed stud screws 5 and attached thereto by means of nuts 9 with intermediate washers 10, as is shown in Fig 2.

[0014] The toilet bowl 2 is then fastened to the floor attachment 1 as described above.

[0015] The invention is mainly directed to the fastening of water toilets to floors but is equally applicable when any article shall be fastened without destroying the waterproofing condition of the material to which the article shall be fastened.

## Claims

1. A method for mounting a toilet (2) or the like to a floor (3) by means of a floor attachment (1) fastened to the floor by means of screws (5), **characterized** by the steps of

- a) attaching stud screws (5) to a subfloor (6),
- b) providing the subfloor with a waterproofing layer (7) sealing against the stud screws,
- c) laying a flooring (8) above the waterproofing layer, and
- d) fastening the floor attachment (1) to the stud screws above the flooring by means of nuts (9).

2. A method according to claim 1, **characterized in that** plugs (7) for the stud screws (5) are provided in pre-drilled holes in the subfloor (6), if the subfloor material is too hard for the stud screws to penetrate themselves.

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3. A mounting assembly for carrying out the method according to claim 1, comprising a floor attachment (1), stud screws (5), and nuts (9).

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4. An assembly according to claim 3, further comprising plugs (7), washers (10) for placing under the nuts (9), and screws (4) for attaching the toilet (2) to the floor attachment (1).

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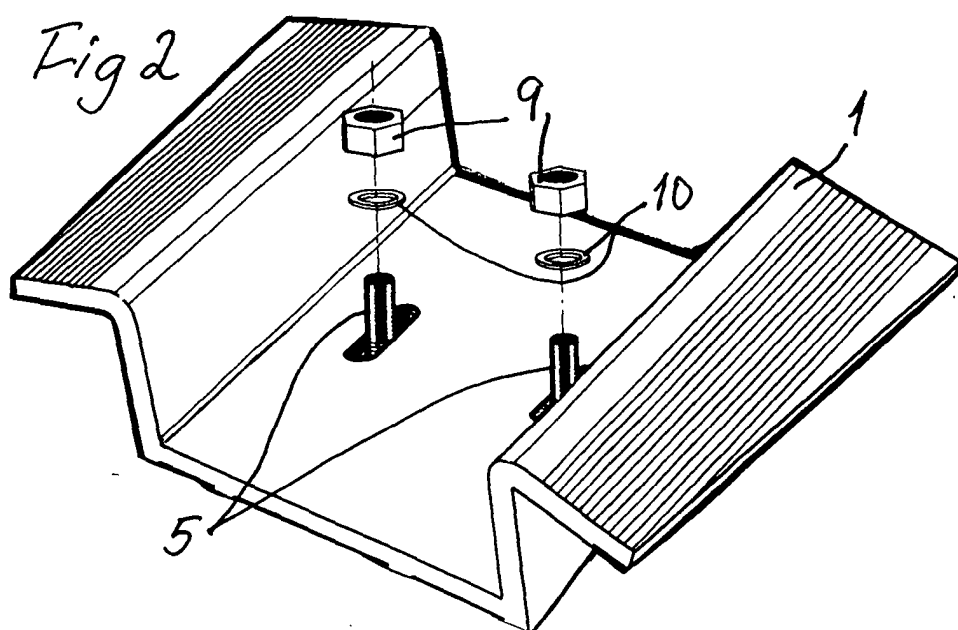
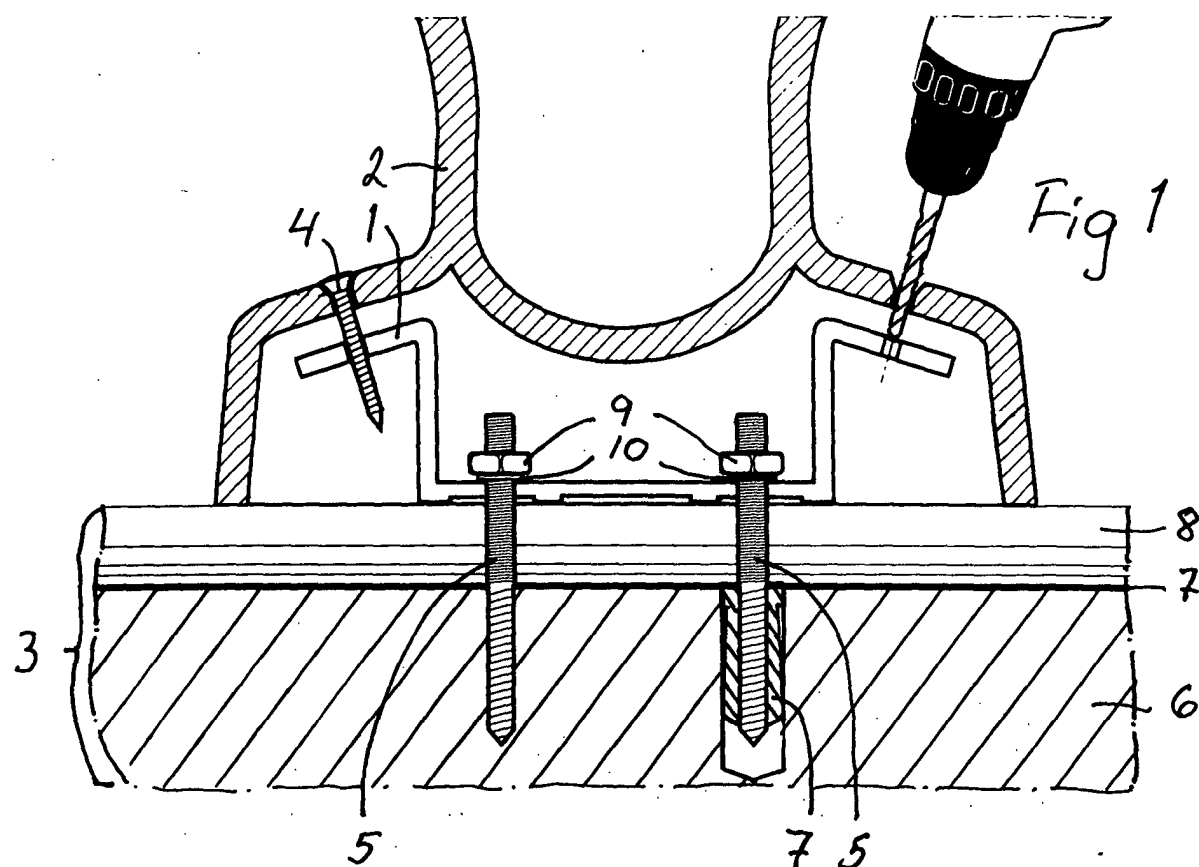
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# EUROPEAN SEARCH REPORT

Application Number  
EP 02 00 6109

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)
A	EP 0 345 610 A (VILLEROY & BOCH) 13 December 1989 (1989-12-13)	1,2	E03D11/16
Y	* the whole document *	4	
	* figure 2 *		
A	FR 2 044 243 A (FONDERIE SOC GEN DE) 19 February 1971 (1971-02-19)	1,2	
X	* the whole document *	3	
	* figure 2 *		
X	US 4 058 859 A (ARROWOOD GORDON W) 22 November 1977 (1977-11-22)	3	
Y	* column 2, line 50 - line 61; figure 3 *	4	
X	US 5 898 954 A (PROVENZANO JOSEPH) 4 May 1999 (1999-05-04)	3	
	* figures 3,5 *		
A		4	
A	DE 89 11 975 U (KERAMAG) 30 November 1989 (1989-11-30)	1,2	
	* page 5, paragraphs 3-5 *		
	* page 6, paragraphs 1,2; figures 1,2 *		
The present search report has been drawn up for all claims			
Place of search <b>MUNICH</b>		Date of completion of the search <b>10 May 2002</b>	Examiner <b>Isailovski, M</b>
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>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</p> <p>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</p> <p>&amp; : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 00 6109

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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10-05-2002

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 0345610	A	13-12-1989	DE	8807318 U1	25-08-1988
			AT	78888 T	15-08-1992
			DE	58901930 D1	03-09-1992
			EP	0345610 A1	13-12-1989
FR 2044243	A	19-02-1971	FR	2044243 A5	19-02-1971
US 4058859	A	22-11-1977	NONE		
US 5898954	A	04-05-1999	NONE		
DE 8911975	U	30-11-1989	DE	8911975 U1	30-11-1989