

(19)



(11)

EP 1 839 904 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

03.10.2007 Bulletin 2007/40

(51) Int Cl.:

B44C 1/28 (2006.01)**B44C 3/12** (2006.01)**E04F 13/00** (2006.01)(21) Application number: **07005633.8**(22) Date of filing: **20.03.2007**

(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• **Ferla, Fabio****36025 Noventa Vicentina VI (IT)**

(72) Inventors:

• **Boggian, Stefano****35040 Casale di Scodosia PD (IT)**• **Ferla, Fabio****36025 Noventa Vicentina VI (IT)**(30) Priority: **29.03.2006 IT VI20060087**

(71) Applicants:

• **Boggian, Stefano****35040 Casale di Scodosia PD (IT)**(74) Representative: **Bettello, Pietro****Via Col d'Echele, 25****36100 Vicenza (IT)**(54) **Device for the application of friezes in relief realised with mosaic tesserae, tiles and alike**

(57) Device for the application of friezes in relief realised using mosaic tesserae, tiles and alike. This comprises at least one profile, advantageously made of plastic material, presenting a dimension considerably greater than the others and that also presents at least one flat face on which is fixed a series of small aligned pieces of mosaic tesserae, tiles and alike. This device can be ad-

vantageously used at the junction (7) of adjacent surfaces on different planes (such as a floor and a side wall), or as a frame (10) around a mirror or similar feature, or as a simple decorative relief effect (11) on a side wall, or lastly, over the angle (8) formed between a bathroom fixture (9) and a side wall to replace filler, silicone or similar materials.

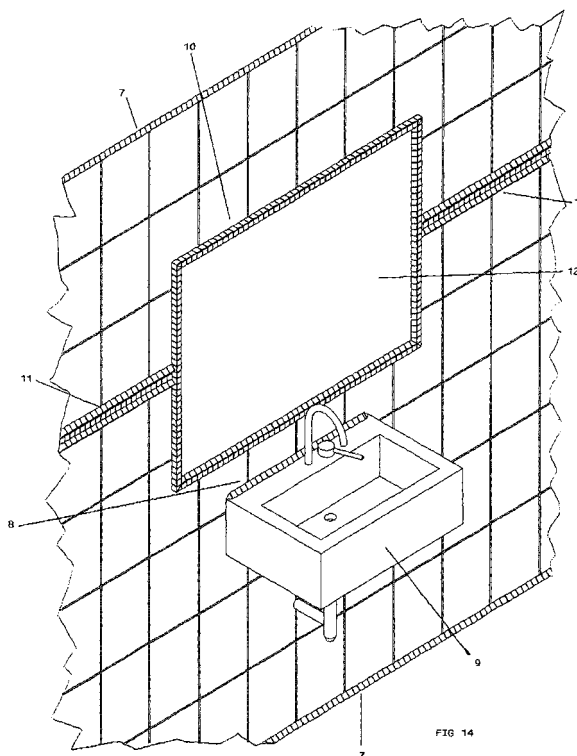


FIG 14

EP 1 839 904 A1

Description

[0001] The present finding relates to a device for the application of friezes in relief realised with mosaic tesserae, tiles and alike.

[0002] Mosaic decorating techniques have been commonly used since ancient times, consisting in the application of small-sized tesserae (generally a few centimetres, but often even less) usually square or rectangular in shape, to surfaces of various types both interior and exterior. These tesserae are produced in a variety of colours and arranged in a manner to obtain a pleasant overall visual effect; in the plainer versions the mosaics are limited to provide a particular colour, which can be uniform, or graduated to a greater or lesser extent, to decorate the surface on which they are applied. Vice versa, in more complex cases, mosaic techniques are used to create figures which are quite complicated and with considerable visual impact, in certain cases resulting in authentic artistic masterpieces.

[0003] However, even in those areas where mosaic techniques are not used for artistic purposes, but simply as a decorative element on surfaces in domestic or office areas (such as on floors, walls, ceilings etc.), special skill is required to obtain the required results. In any case, mosaic application is a long and complex operation; naturally this operation is even more difficult to perform the smaller the size of the tesserae, and the more complicated the design to be reproduced.

[0004] One of the main difficulties encountered by the mosaic layer is the fact that the surfaces on which the tesserae must be applied are almost never perfectly flat, and even where the surface is plane, it is rarely perfectly square or rectangular. Lastly, often two surfaces meet adjacent to each other (for example where the wall meets the floor surface) but are not perfectly perpendicular. Naturally the craftsman must compensate by filling the various surfaces perfectly in spite of the form they may have. This work is made even more difficult in that, because of the intrinsic meticulous nature of the work, covering surfaces with mosaics is required by a very demanding kind of customer, which is ready to cover all the costs involved in the operation, but which obviously, will require absolutely impeccable results. This means that if the results are not considered perfect, this will provoke criticism and can even lead to the replacement of certain areas of laid mosaic, which in extreme cases, can result in a considerable reduction in the payment for the completed work due to poor quality results.

[0005] It is true that to obtain perfect finished results, the layer must cut the tesserae, which are already very small in size, into even smaller pieces in order to apply these pieces one by one to fill all the empty portions of the surface which cannot be covered by normal tesserae. Therefore it is totally obvious that manual cutting operations and the successive application of all the "non-standard" tesserae are likely to involve a considerable amount of extra time for the layer. This results as especially costly

when the estimate has been calculated according to the surface to be covered, meaning that when making his estimate, the mosaic layer must take into account any faulty areas in the surface to be covered that will require extra time during laying operations; if this is not calculated in advance, any extra work he may need to carry out to complete the work correctly will not be taken into account, provoking a considerable increase in work time, and income, because of the impossibility of carrying out other work during this time.

[0006] In reality, similar problems arise for floor tilers when laying ceramic tiles in civil buildings, offices and similar areas. In this case as well, the tiler must cut certain tiles in order to complete the work for the same reasons involving surface imperfection as those described above. Naturally any "corrections" in these cases are relatively simple since the pieces of tile required to fill the surface are generally much larger than the mosaic tesserae.

[0007] The first aim of the present finding is to provide a device that will facilitate the laying of mosaic tesserae, tiles and alike, considerably, especially in the areas where the surfaces are adjacent and different.

[0008] A further aim of the finding is to provide a device that will generally permit easy application of a frieze in relief composed of mosaic tesserae, tiles and alike, at any position on a wall surface, and especially on horizontal or vertical corner angles, or in areas which protrude from said surfaces, such as borders around mirrors, and alike.

[0009] Yet another aim of the device according to the invention, is to provide a device for the application of frieze in relief composed of mosaic tesserae, tiles and alike, on curved edges and surfaces which are not rectilinear.

[0010] This achieved by the present invention with the use of at least one profile in a plastic material having one dimension which is decidedly larger than the others, and which further presents at least one flat face on which a series of small aligned portions of mosaic tesserae, tiles, or alike, can be fixed.

[0011] Practically speaking, with this constructive arrangement, the profile can be placed in the desired position, such as along the angle join between the flooring and the wall, for example, thus covering the area in question, so that the operator does not need to cut and apply a large number of very small pieces of different shapes and sizes along said angle, providing considerable advantages from an operational point of view.

[0012] In fact, said profile can also be used simply as a decorative border or to provide a clean finish around protruding elements.

[0013] These and other characteristics of the present finding will be described in detail, with particular reference to certain specific embodiments, provided simply as an example, but not to be considered limiting in any manner, with the help of the appended drawings wherein:

[0014] Figures 1-11 (drawings I and II) show an axonometric view of certain embodiments of the device ac-

cording to the finding; the figures shown alongside the aforesaid figures, identified by suffixes A and B, show side views on a slightly larger scale in relation to the corresponding figures of the embodiment.

[0015] Figures 12 to 15 (drawings 3-5) show various possible applications of the device according to the invention.

[0016] In one of the simplest embodiments (figure 1) the invention provides for a profile 1, in this case rectilinear and with a substantially triangular cross section, as can be seen easily in figures 1A and 1B. In particular, profile 1 shown in figure 1A forms a "closed" triangle cross-section, while the example shown in figure 1B forms an "open" triangle, in that one of the three sides is not present. In any case, profile 1, which is manufactured preferably, but not exclusively, in a plastic material, presents a face 2, which in the present case represents the hypotenuse of a right-angled triangle as shown in the cross sections in figures 1A and 1B, on which a series of tesserae 3 are fixed adjacent to each other in succession.

[0017] Figures 2 to 6 (as well as in the corresponding side views of said profiles) show that the profile 1 can actually assume different forms, such as a trapezoidal form (figure 2A), an isosceles triangle (Figures 3A, 4A, 5A), or a right-angled isosceles "open" triangle (Figure 6A). In addition, as can be seen in figures 2 to 5, a plurality of profiles 1 can be used simultaneously, arranged in various manners to obtain the final form required by the user, for reasons which will be explained in more detail further on. Whatever the constructive arrangement of the device according to the finding, the tesserae 3 can be applied to one or more faces of the profile in use.

[0018] The tesserae can consist of elements commonly used to create mosaics as specified previously, or according to the user's needs, small pieces of tiles made of ceramics and similar materials can be applied, according to the final effect the user wishes to obtain.

[0019] Figures 7 and 8 show that the device according to the finding can also involve the use of profiles 1 with a very shallow section, made in an elastic material, on which a plurality of tesserae 2, or simply one single tessera 2 can be fixed. By examining figures 10 and 11, these show that in this case as well, profile 1 can assume different forms in order to adapt to particular situations according to the needs of the user. However, with this constructive arrangement, it is possible to also use the device according to the invention on curved areas, as will be explained in more detail further on.

[0020] Figure 12 shows how the device according to the invention can be typically used at the junction between two surfaces covered with ceramic tiles 4 or mosaic tesserae 5, as shown in figure 13. Practically speaking, by using the device according to the invention appropriately covered with mosaic tesserae or ceramic tiles, it is possible to cover said end areas, using this element with a pleasant decorative effect, without the need for cutting a large number of tesserae of different shapes

and sizes in order to compensate the imperfections present in the surface to be covered, as explained previously.

[0021] Furthermore, Figure 13 shows how the device according to the finding applied in the constructive arrangement shown in figures 7 and 11, can be used at the junction between wall and flooring with a curved configuration. In addition, the device according to the invention provides an extremely efficient solution when acting as reinforcing on corners 6, where advantageously the profile shown in figure 6 is applied.

[0022] Figure 14 shows how the invention can be advantageously used not only to cover the join 7 between the side wall of a room and the flooring and/or ceiling, but also the angle 8 formed between the wall and the bathroom fixture 9, as a replacement for filler, silicone, or similar materials. Furthermore, the device according to the invention can be used efficiently and to good effect to create a frame 10 around a mirror or some similar application, and yet again, as an element in relief 11, applied to the wall for decorative purposes.

[0023] Lastly, figure 15 shows a detail of an application method to create a frame 10 around a panel 12 of a mirror, using the embodiment of the device according to the invention shown in figure 5.

[0024] The aforesaid descriptions explain how the device according to the invention manages to resolve in a very simple and efficient manner, a problem which mosaic and tile layers encounter very often when joining different adjacent surfaces. Furthermore, the device according to the invention is particularly appropriate for creating cornices and elements in relief of various types of surfaces, whether in order to provide protection (corner reinforcing), or simply for decorative reasons. All effects are obtained by means of a constructive arrangement which is intrinsically economical and also very easy to apply.

[0025] It must also be noted that the present invention can assume various forms and aspects different from those described previously, while remaining within the context of the present patent. In particular, the invention can also involve the use of profiles having a cross section considerably different from those previously illustrated and described.

Claims

1. DEVICE FOR THE APPLICATION OF FRIEZES IN RELIEF REALISED USING MOSAIC TESSERAE, TILES OR ALIKE, **characterised in that** it has at least one profile (1) presenting a dimension considerably larger than the others and that also presents at least one flat face (2) on which is fixed a series of small aligned pieces of mosaic tesserae (3), tiles and alike.
2. DEVICE according to claim 1 **characterised in that**

it is realised in a rigid material.

3. DEVICE according to claim 1 **characterised in that** it is realised in a flexible elastic material. 5
4. DEVICE according to claims 2 or 3 **characterised in that** it envisages the use of a plurality of profiles (1) arranged reciprocally in contact with each other along the total longitudinal length. 10
5. USE of the device according to one or more of the claims from 1 to 3 in the junction area between adjacent surfaces arranged on different planes.
6. USE of the device according to one or more of the claims from 1 to 3 as a protection element on wall corners and alike. 15
7. USE of the device according to one or more of the claims from 1 to 3 as a framing element (10) around mirrors and alike. 20
8. USE of the device according to one or more of the claims from 1 to 3 as an element in relief (11) for a decorative feature on walls and similar surfaces. 25
9. USE of the device according to one or more of the claims from 1 to 3 over the angle (18) formed by the bathroom fixture (9) and the adjacent vertical wall, as a replacement for filler, silicone or similar materials. 30

35

40

45

50

55

FIG 1A



FIG 1B

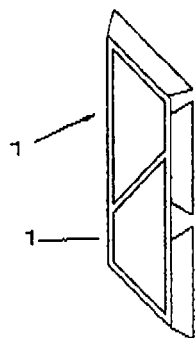


FIG 2A

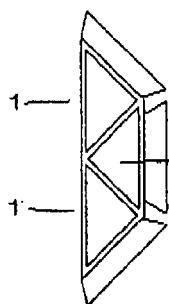


FIG 3A

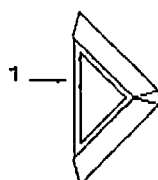


FIG 4A

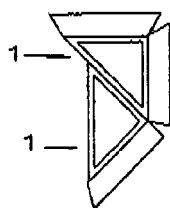


FIG 5A



FIG 6A

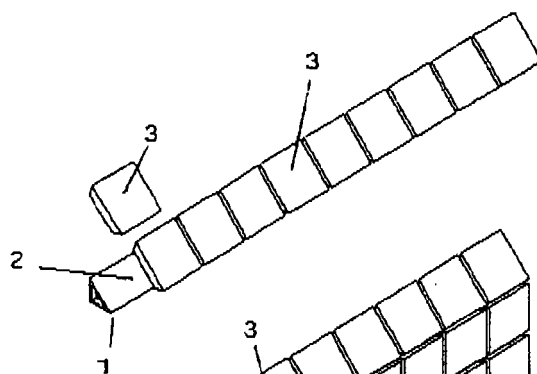


FIG 1

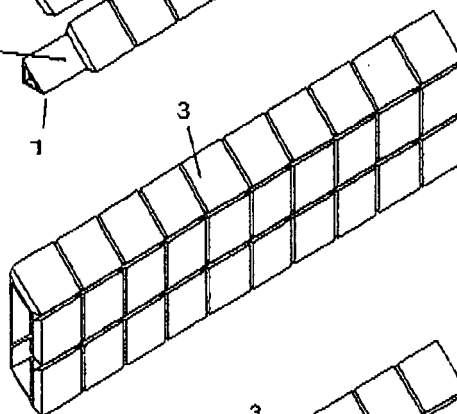


FIG 2

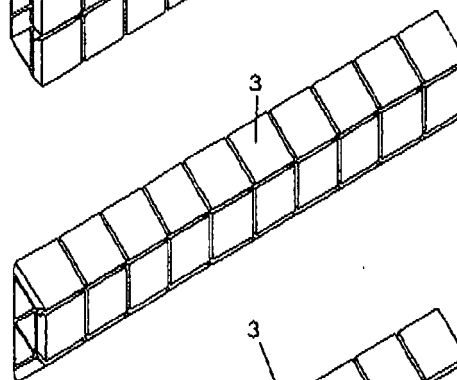


FIG 3

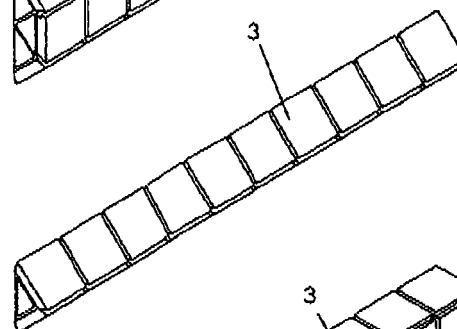


FIG 4

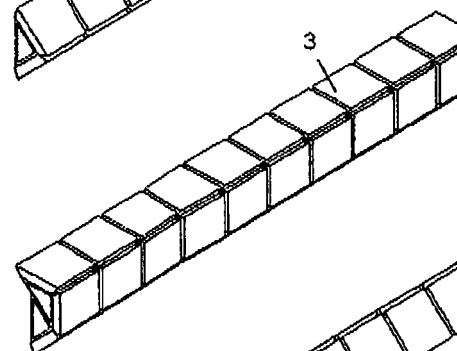


FIG 5

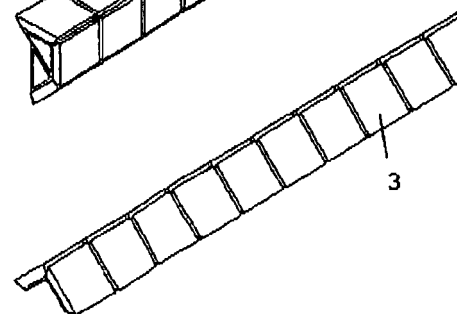


FIG 6

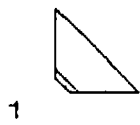


FIG 7A

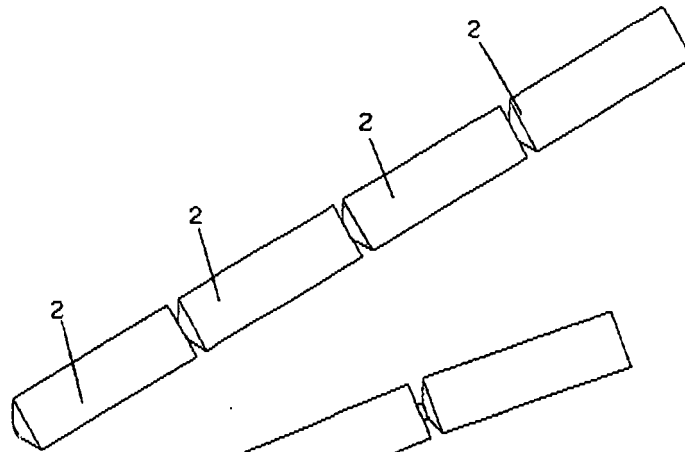


FIG 7



FIG 8

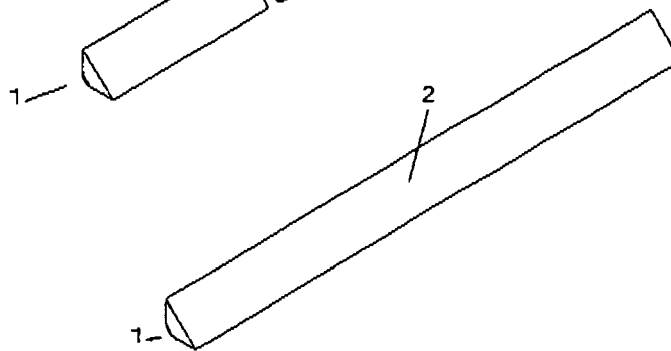


FIG 9

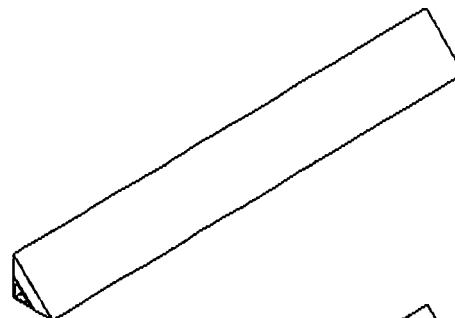


FIG 10

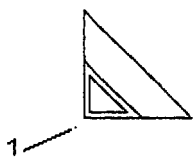


FIG 10A

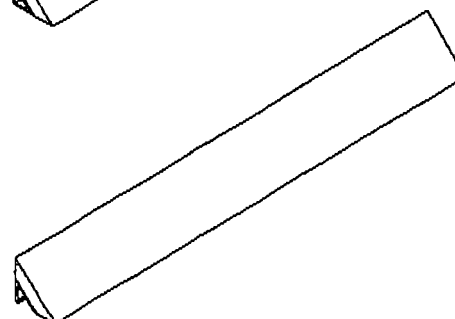


FIG 11



FIG 11A

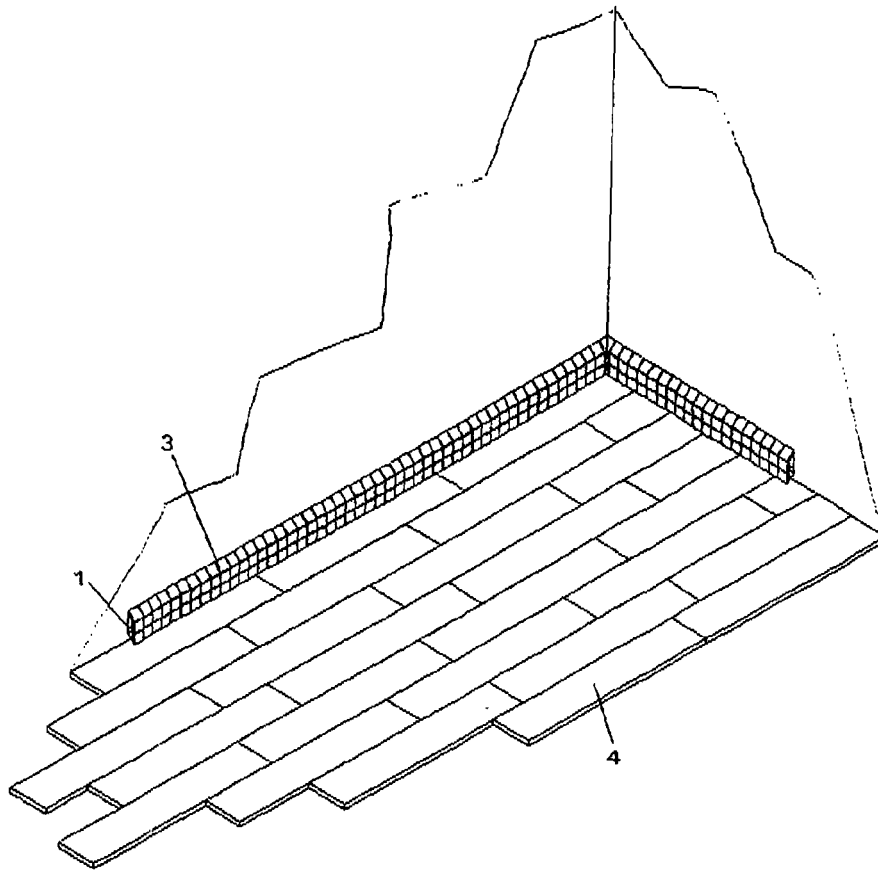
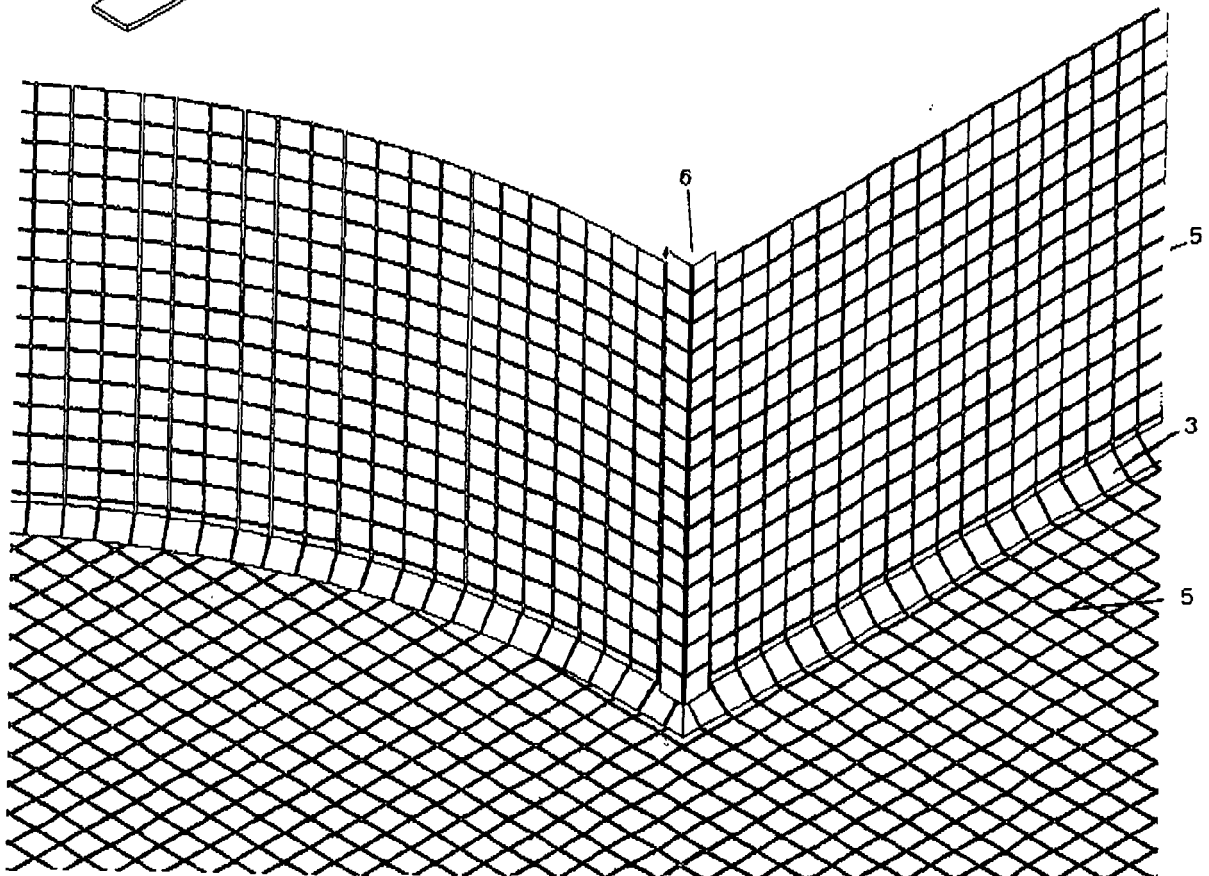
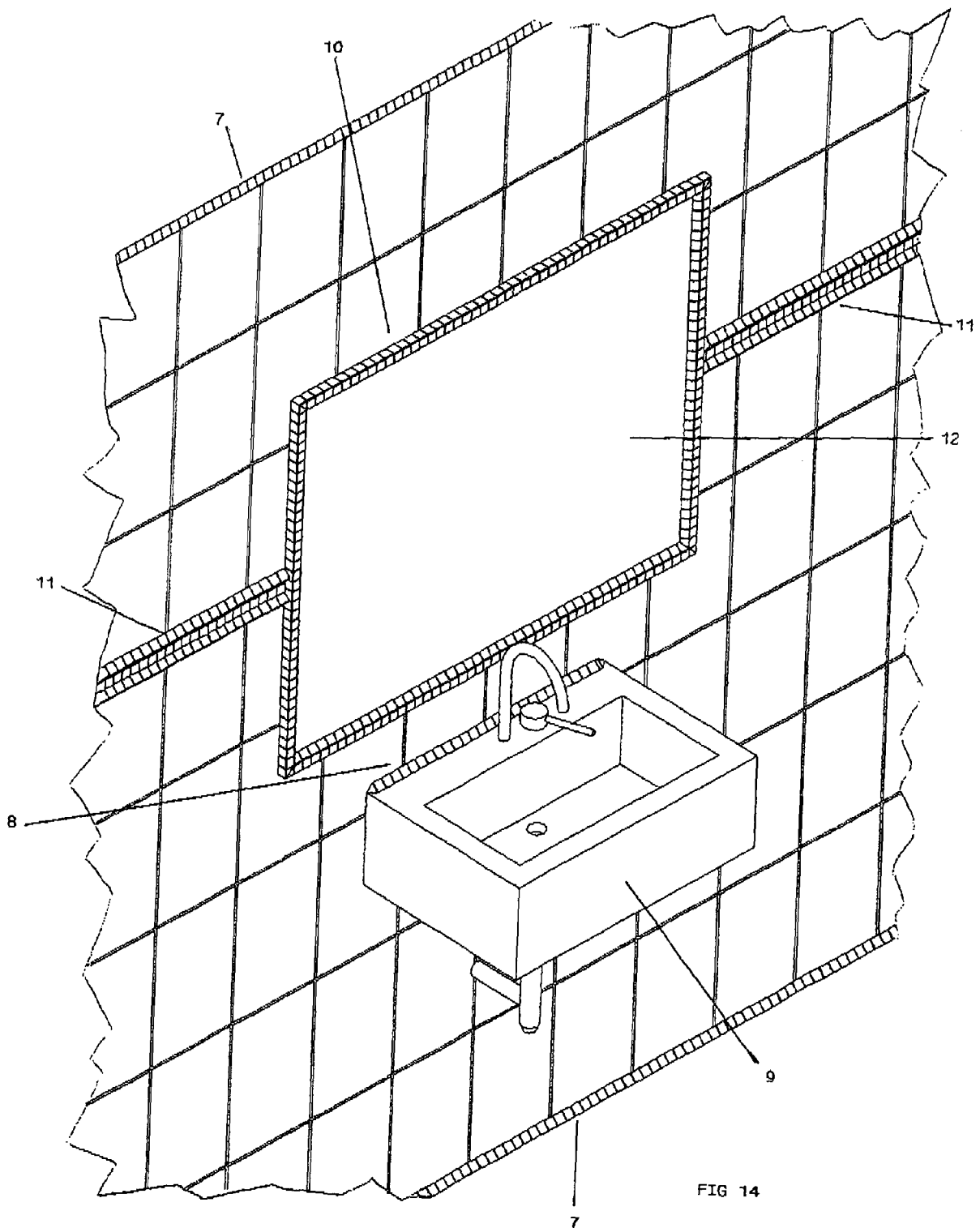


FIG 12





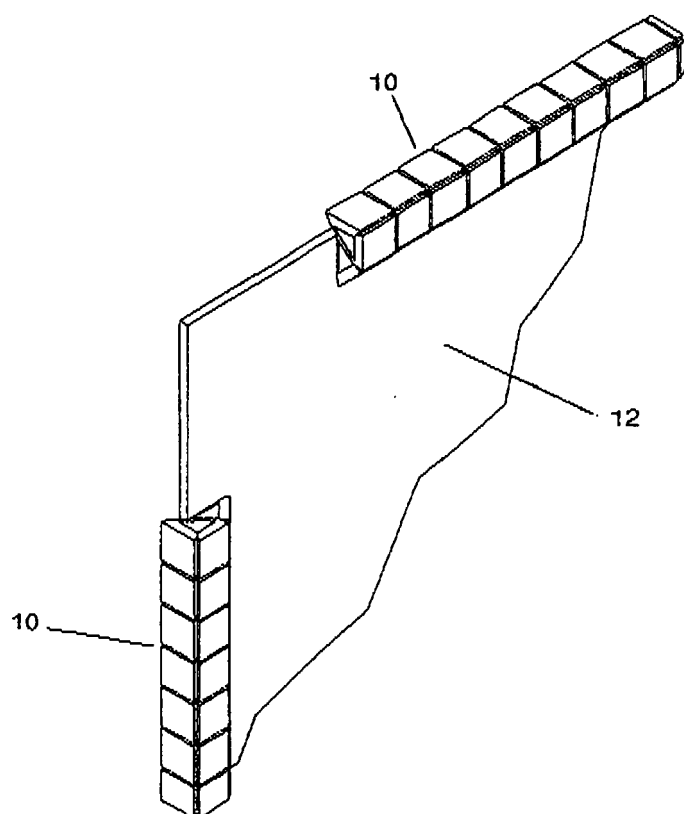


FIG 15



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 00 5633

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 4 916 875 A (KASHIWAGI TOSHIO [JP]) 17 April 1990 (1990-04-17) * column 3, line 4 - column 4, line 63; figures 1,4,5 *	1-9	INV. B44C1/28 B44C3/12 E04F13/00
X	GB 2 012 342 A (HOKKAIDO NOZAI KOGYO CO) 25 July 1979 (1979-07-25) * the whole document *	1-9	
X	US 4 803 821 A (FUNAKI MOTOKATSU [JP]) 14 February 1989 (1989-02-14) * column 3, line 31 - column 5, line 56; figures 3-6 *	1-9	
X	US 6 408 585 B1 (TAJIMA HIROSHI [JP]) 25 June 2002 (2002-06-25) * column 6, line 13 - column 8, line 5; figures 1-3 *	1-9	
X	DE 299 17 194 U1 (KISKALT DORIS [DE]) 5 January 2000 (2000-01-05) * the whole document *	1-9	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			B44C E04F
Place of search		Date of completion of the search	Examiner
Munich		4 June 2007	Sartor, Michele
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			

1
EPO FORM 1503 03.02 (P04C01)

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

EP 07 00 5633

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.

04-06-2007

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4916875	A	17-04-1990	NONE	

GB 2012342	A	25-07-1979	DE 2837429 A1	12-07-1979
			JP 1161974 C	10-08-1983
			JP 54082813 A	02-07-1979
			JP 57057579 B	06-12-1982
			US 4238915 A	16-12-1980

US 4803821	A	14-02-1989	JP 1933293 C	26-05-1995
			JP 6063337 B	22-08-1994
			JP 63217059 A	09-09-1988

US 6408585	B1	25-06-2002	JP 3408449 B2	19-05-2003
			JP 2000303659 A	31-10-2000

DE 29917194	U1	05-01-2000	NONE	
