

(19)



(11)

EP 1 764 458 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
13.08.2008 Bulletin 2008/33

(51) Int Cl.:
E04H 4/14 (2006.01) E04H 4/12 (2006.01)

(21) Application number: **06380245.8**

(22) Date of filing: **14.09.2006**

(54) System for construction of swimming pool edges

System für Aufbau der Schwimmbeckenränder

Système pour la construction des bords de piscine

(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 NL PL PT RO SE SI
SK TR**
Designated Extension States:
BA HR RS

(30) Priority: **14.09.2005 ES 200502237**

(43) Date of publication of application:
21.03.2007 Bulletin 2007/12

(73) Proprietor: **CAÑADA, S.A.**
44600 Alcañiz (Teruel) (ES)

(72) Inventors:
• **Molinos, Fidel Ferrando**
44600 Alcaniz (Teruel) (ES)
• **Orta Sorribas, Juan Carlos**
44600 Alcaniz (Teruel) (ES)

(74) Representative: **Schäfer, Matthias W.**
Patentanwalt
Schwannseestrasse 43
81549 München (DE)

(56) References cited:
FR-A- 2 860 822 GB-A- 1 174 063
US-A- 3 452 495 US-A- 6 023 793

EP 1 764 458 B1

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

Description

[0001] As stated in the title of this specification, the following invention relates to a system for the construction of swimming pool edges, being of use in the construction of both overflowing and non-overflowing swimming pools, the top of which is finished in accordance with any of the known systems, having as its primary and essential object that the two or three finishing pieces making up the perimetric edge of the pool and the channel, respectively, are made of a porcelain material, preferably enamelled on their exposed surfaces, permitting them to act in turn as frame and embellishing element, thereby avoiding the laying of ceramic lining tiles.

[0002] So, not having to lay the conventional ceramic tiles on the perimetric frame of the swimming pool leads to a reduction in costs and a reduction in assembly time, a reduction in materials used, and, in short, a lower economic cost, in addition to greater security with regard to loose pieces possibly coming away and greater consistency in the perimeter of the pool.

FIELD OF APPLICATION

[0003] This specification describes a system for construction of swimming pool edges, both overflowing and non-overflowing, having application in all kinds of swimming pool construction.

PRIOR ART OF THE INVENTION

[0004] Conventionally, in the construction of swimming pools, the perimetric edge thereof can in theory be configured according to two possible variants, these two possible variants being known as the "Finnish system" and the "Zurich system".

[0005] By means of the cited systems, at the moment of construction of the swimming pool some formwork needs to be created, close to the edge, in order to produce a outletoutlet channel.

[0006] Likewise, in the two systems that are cited, the concrete perimetric edge or frame have to be lined by means of some ceramic tiles, and the cost of these tiles themselves and of the labour required for their laying therefore have to be borne in mind.

[0007] Entering into the details of these two said systems, we can state that in the "Finnish system" the perimeter (beach) of the swimming pool basin is provided with a slight inclination, causing the water to overflow and being provided with a small undercut in proximity to its internal end.

[0008] In the "Zurich system" the perimeter of the swimming pool basin is horizontal and the element or tile of its internal end presents a small lip, in such a way that no overflow of water takes place on that perimeter.

[0009] Moreover, we can consider a third system, known as the "natural system", in which the basin of the swimming pool is likewise horizontal and the element or

tile of its internal end presents a small lip in such a way that no overflow of water takes place over that perimeter and, moreover, the outlet channel can be absent.

[0010] We can also consider the document ES 2257133 A1 which claims a "set of pieces for the construction of the upper edge and drainpipe in overflowing swimming pools", whose set of pieces embrace a diversity of concrete unitary pieces for a specific assembly (straight pieces, corner pieces, embedded stairs or outlet) and which presents as the basic piece a single concrete piece which will shape the perimeter on which the water of the swimming pool will overflow and the channel with a U-shaped cross-section, in such a way that the corresponding ceramic tiles are laid on the perimeter on which the water overflows.

[0011] FR 2 860 822 A1 discloses a system of parts for the construction of higher edges and curbstones of swimming pool overflows. According to this invention, a U-shaped section, integrated to a side prolongation which functions as a part of a swimming pool edge, is used as a channel part.

DESCRIPTION OF THE INVENTION

[0012] The present invention describes a system for construction of the edges of swimming pools, both overflowing and non-overflowing, the top of which is finished in accordance with any of the known systems cited above in such a manner that the system comprises at least two backed pieces of porcelain material, such that a first piece of porcelain material and of parallelepiped general shape defines the perimetric end of the swimming pool and the second piece of porcelain material and of U-shaped cross-section defines the outlet channel.

[0013] The first piece, which defines the perimetric edge of the swimming pool, has its upper exposed surface grooved, while the flanges of the second piece with a U-shaped cross-section display a lower height on the internal side of the first piece.

[0014] Moreover, the exposed upper grooved surface can present a slight descending inclination, of approximately 4°, towards the basin of the pool, with the water from the pool overflowing on top of it.

[0015] Likewise, the exposed upper grooved surface of the first piece made of porcelain material can be presented according to a horizontal plane, without the water from the swimming pool overflowing on top of it.

[0016] In accordance with the configuration of the second piece of porcelain material which defines the outlet channel, positioned directly above it is a grille which is flush with the innermost side of the piece backed onto it.

[0017] Between the two pieces of porcelain material described, the system is able to incorporate a third piece, likewise of porcelain material, of parallelepiped general shape, with its upper surface grooved as an extension of the upper surface of the first piece.

[0018] This embodiment permits the most complex needs to be met, obtaining an overflowing edge of greater

length, with the channel remaining in a more internal position.

[0019] Moreover, the pieces of porcelain material shaping the edge of the swimming pool with their exposed enamelled surfaces constitute the frame and the lining, in other words, by means of using the pieces of porcelain material with their exposed enamelled surfaces acting as a lining one avoids having to lay ceramic tiles for embellishment, which represents a major saving.

[0020] In a practical embodiment of the invention, the pieces shaping the edge of the pool can be of natural flagstone, enamelled or otherwise, thereby having application in the construction of swimming pools by the "natural system" which generally lack a channel.

[0021] In a new practical embodiment of the invention, the pieces shaping the swimming pool edge can be of any polymer material, having application in the construction of any kind of swimming pool.

[0022] Moreover, the inner face of the first piece which defines the perimetric edge of the pool can be extended from the upper rounded edge in a manner that is flat or, starting from the rounded edge, it can present an offset towards the inside in relation to which the upper tiles relative to the basin of the swimming pool will be laid.

[0023] In order to complement the description that is going to be made, and with the aim of aiding a better understanding of the characteristics of the invention, this specification is accompanied by a set of drawings containing figures which, on an illustrative rather than limiting basis, the most characteristic details of the invention are represented.

BRIEF DESCRIPTION OF THE DESIGNS

[0024] Figure 1. Shows a perspective view of a detail of the system for construction of swimming pool edges, according to a practical embodiment of overflow, where it can be seen how, basically, it is created by the backing of a pair of pieces of a porcelain material which define the perimetric edge and the outlet channel.

[0025] Figure 2. Shows a lateral elevation view of a practical embodiment according to the previous figure, in which the construction system for edges of overflowing swimming pool is based on two pieces of porcelain material.

[0026] Figure 3. Shows a lateral elevation view of a second practical embodiment in which the construction system for edges of overflowing swimming pool is based on three pieces of porcelain material.

[0027] Figure 4. Shows a view in cross-section, according to a diagrammatic detail, of the top of a conventional overflowing swimming pool, wherein can be seen the channel materialised by some formwork and the lining tiles.

[0028] Figure 5. Shows a view in cross-section, according to a diagrammatic detail, of the top of a non-overflowing swimming pool with skimmer.

[0029] Figure 6. Shows a view in perspective of a detail

of the system for construction of swimming pool edges, according to a second practical embodiment of the first finishing piece for the perimetric edge of the pool.

[0030] Figure 7. Shows a detail view of the upper internal rounded edge of the first finishing piece for the swimming pool, according to a second variant of practical embodiment, in which the offset made in its internal face can be seen.

DESCRIPTION OF A PREFERRED EMBODIMENT

[0031] With the commented figures in view and in accordance with the numbering adopted, we can see how in figure 4 of the designs, for a better understanding of the object of the patent, a conventional embodiment of the top for an overflowing swimming pool has been represented, where it can be seen how, in proximity to the perimetric brickwork edge 6 of the swimming pool, the channel 9 has been produced by means of some formwork and later on the ceramic lining tiles 7 have to be laid along with the grille 8 over the channel 9.

[0032] Likewise, represented in figure 5 of the designs is a conventional embodiment of a non-overflowing swimming pool with skimmer.

[0033] Moreover, in figure 1 of the designs we can see how the system for the construction of swimming pool edges that is proposed comprises at least two pieces A and B of porcelain material which are backed in their mounting, a first piece A of porcelain material of parallelepiped general shape defining the perimetric end of the swimming pool, while the second piece B of porcelain material and of U-shaped cross-section defines the outlet channel 2.

[0034] The first piece A has its upper exposed surface 3 grooved, while the flanges 4 of the second piece B with a U-shaped cross-section display a lower height on the internal side of the backed piece, in such a way that when the corresponding grille 1 is positioned directly on the flanges 4 of the second piece B, said grille remains flush with the innermost side of the piece backed onto it.

[0035] The exposed upper grooved surface 3 of the first piece A of porcelain material can display a slight descending inclination of approximately 4° towards the basin of the pool, or it can be presented according to a horizontal plane.

[0036] So, the proposed system is adapted to both the "Finnish system" and to the "Zurich system" of conventional top for swimming pools, in other words, for overflowing and non-overflowing pools.

[0037] Likewise, in accordance with figure 3 of the designs, we can see how the proposed system is able to incorporate, between pieces A and B of porcelain material as described, a third piece C, likewise of porcelain material, of parallelepiped general shape, with its upper surface 5 grooved as an extension of the upper surface 3 of the first piece A.

[0038] With this practical embodiment, the outlet channel is permitted to remain more internal to the edge of

the pool, obtaining an overflow perimeter (beach) of greater width.

[0039] Logically, in this practical embodiment, given that the piece C remains mounted with its upper surface 5 as an extension of the upper surface 3 of the piece A, the flanges 4 of the piece B of U-shaped cross-section which defines the channel will present a greater height so that, when the grille 1 is positioned, it is flush with the innermost side of the piece 5.

[0040] In short, the pieces of porcelain material shaping the edge of the swimming pool will preferably be enamelled on their exposed surfaces and at the same time they constitute the frame and the lining, in such a way that as there is no need to lay ceramic lining tiles, so less time is required for their mounting, in other words, there is less labour and therefore an economic saving, in addition to greater security with regard to loose pieces possibly coming away and greater consistency in the perimeter of the pool.

[0041] Similarly, with the aim of adapting the proposed system to the familiar "natural system" in swimming pool construction, the piece 4 shaping the edge of the pool will be able to be of natural flagstone, enamelled or otherwise, for the shaping thereof, with this material being able to be used in other conventional systems for swimming pool construction.

[0042] Moreover, the inner face of the first piece A which defines the perimetric edge of the swimming pool can be extended from the upper rounded edge in a manner that is flat, as can be appreciated from figure 1 of the designs.

[0043] Likewise, in a variant of practical embodiment the first piece A which defines the perimetric edge of the swimming pool presents, starting from the rounded edge 10, an offset 11 towards the inside in such a way that when laying the upper tiles 12 relative to the basin of the swimming pool, they will be laid in relation to it, as can be appreciated from figure 6 of the designs.

Claims

1. SYSTEM FOR CONSTRUCTION OF SWIMMING POOL EDGES, being of use in the construction of swimming pools, both those which are overflowing and non-overflowing with skimmers, the system comprising at least two backed pieces (A) and (B) of porcelain material, a first piece (A) of porcelain material of parallelepiped general shape defining the perimetric end of the swimming pool and the second piece (B) of porcelain material and of U-shaped cross-section defining the outlet channel (2), such that the first piece (A) has its upper exposed surface (3) grooved, **characterised in that** the flanges (4) of the second piece (B) with a U-shaped cross-section display a lower height on the internal side of the backed piece (A), the pieces (A) and (B) constituting with their exposed enamelled surfaces a frame and

a lining.

2. SYSTEM FOR CONSTRUCTION OF SWIMMING POOL EDGES, according to claim 1, **characterised in that** the upper exposed grooved surface (3) of the first piece (A) of porcelain material displays a slight descending inclination, of approximately 4 deg. , towards the basin of the swimming pool.
3. SYSTEM FOR CONSTRUCTION OF SWIMMING POOL EDGES, according to claim 1, **characterised in that** the upper exposed grooved surface (3) of the first piece (A) of porcelain material is presented according to a horizontal plane.
4. SYSTEM FOR CONSTRUCTION OF SWIMMING POOL EDGES, according to claim 1, **characterised in that** positioned directly above the flanges (4) of the second piece (B) of the channel is a grille (1) flush with the innermost side of the piece backed onto it.
5. SYSTEM FOR CONSTRUCTION OF SWIMMING POOL EDGES, according to claim 1, **characterised in that** the system is able to incorporate, between pieces (A) and (B) of porcelain material as described, a third piece (C), likewise of porcelain material, of parallelepiped general shape, with its upper surface (5) grooved as an extension of the upper surface (3) of the first piece (A).
6. SYSTEM FOR CONSTRUCTION OF SWIMMING POOL EDGES, according to the above claims, **characterised in that** the pieces (A) and (B) shaping the swimming pool edge can be of natural flagstones, enamelled or otherwise.
7. SYSTEM FOR CONSTRUCTION OF SWIMMING POOL EDGES, according to the above claims, **characterised in that** the pieces (A) and (B) shaping the swimming pool edge can be of a polymer material.
8. SYSTEM FOR CONSTRUCTION OF SWIMMING POOL EDGES, according to claim 1, **characterised in that** the inner face of the first piece (A) of porcelain material can be extended from the upper rounded edge (10) in a manner that is flat.
9. SYSTEM FOR CONSTRUCTION OF SWIMMING POOL EDGES, according to claim 1, **characterised in that** the inner face of the first piece (A) of porcelain material presents an offset (11) from the upper rounded edge (10) towards the inside.

Patentansprüche

1. System für die Konstruktion von Rändern eines

- Schwimmbeckens, zum Gebrauch beim Bau solcher Schwimmbeckens, sowohl für überfließende als auch nicht überfließende Abstreifen, wobei das System mindestens zwei aneinander gereihte Teile (A) und (B) aus Porzellan-Material aufweist, nämlich das erste Teil (A) aus Porzellan-Material in parallelepiped-der allgemeiner Form, welches das Umfangs-Ende des Schwimmbeckens definiert, und das zweite Teil (B) aus Porzellan-Material mit U-förmigem Querschnitt, das den Ausflussskanal (2) definiert, wobei das erste Teil (A) auf seiner oberen freiliegenden Fläche (3) mit Rillen versehen ist, **dadurch gekennzeichnet, dass** die Flansche (4) des zweiten Teils (B) mit einem U-förmigen Querschnitt eine niedrigere Höhe auf der Innenseite des daran gereihten Teils (A) aufweisen, und die Teile (A) und (B) mit ihren exponierten glasierten Flächen einen Rahmen und eine Auskleidung bilden.
2. System für die Konstruktion von Rändern eines Schwimmbeckens gemäß Patentanspruch 1, **dadurch gekennzeichnet, dass** die obere freiliegende gerillte Fläche (3) des ersten Teils (A) aus Porzellan-Material eine leicht absteigende Neigung von ungefähr 4 Grad in Richtung des Becken des Schwimmbeckens aufweist.
 3. System für die Konstruktion von Rändern eines Schwimmbeckens gemäß Patentanspruch 1, **dadurch gekennzeichnet, dass** die obere freiliegende gerillte Fläche (3) des ersten Stücks (A) aus Porzellan-Material sich als eine horizontale Ebene darstellt.
 4. System für die Konstruktion von Rändern eines Schwimmbeckens gemäß Patentanspruch 1, **dadurch gekennzeichnet, dass** ein Gitter (1) direkt oberhalb der Flansche (4) des zweiten Teils (B) des Kanals aufgesetzt ist, das mit der innersten Seite des daran gereihten Teils abschließt.
 5. System für die Konstruktion von Rändern eines Schwimmbeckens gemäß Patentanspruch 1, **dadurch gekennzeichnet, dass** das System zwischen den Teilen (A) und (B) aus Porzellan-Material ein drittes Teil (C) aufnehmen kann, das ebenfalls aus Porzellan-Material besteht, eine parallelepiped Gestalt hat, und dessen obere Fläche (5) mit Rillen versehen ist, als eine Erweiterung der oberen Fläche (3) des ersten Teils (A).
 6. System für die Konstruktion von Rändern eines Schwimmbeckens gemäß vorstehender Patentansprüche, **dadurch gekennzeichnet, dass** die den Rand des Schwimmbeckens formenden Teile (A) und (B) aus natürlichen Fliesen, glasiert oder anderswie behandelt, bestehen können.
 7. System für die Konstruktion von Rändern eines Schwimmbeckens gemäß vorstehender Patentansprüche, **dadurch gekennzeichnet, dass** die den Rand eines Schwimmbeckens bildenden Teile (A) und (B) aus Polymer-Material sein können.
 8. System für die Konstruktion von Rändern eines Schwimmbeckens gemäß Patentanspruch 1 **dadurch gekennzeichnet, dass** die Innenfläche des ersten Teils (A) aus Porzellan-Material sich von dem oberen abgerundeten Rand (10) in ebener Weise erstrecken kann.
 9. System für die Konstruktion von Rändern eines Schwimmbeckens gemäß Patentanspruch 1, **dadurch gekennzeichnet, dass** die Innenfläche des ersten Teils (A) aus Porzellan-Material einen Absatz (11) von dem oberen abgerundeten Rand (10) nach innen aufweist.

Revendications

1. Système pour la construction des bords de piscine utilisé dans la construction des piscines à débordement ou dans la construction des piscines d'un autre type possédant un système d'écumage surverse ou écumoire, **caractérisé en ce que** le système comprend au moins deux pièces affleurantes (A) et (B) en porcelaine, une première pièce (A) en porcelaine et en forme générale de parallélépipède définissant la fin du périmètre du bassin de la piscine et une seconde pièce (B) en porcelaine présentant une coupe transversale en forme de U définissant un canal exutoire (2), tel que la face supérieure de la première pièce (A) est rainurée, les ailes (4) de la seconde pièce (B) qui présente une coupe transversale en forme de U ayant une hauteur moins importante du côté affleurant à la pièce (A), et les pièces (A) et (B) constituant par leur surfaces supérieures émaillées le rebord et la margelle de la piscine.
2. Système pour la construction des bords de piscine, selon la revendication 1, **caractérisé en ce que** la partie supérieure rainurée (3) de la première pièce en porcelaine présente un angle d'environ 4 degrés d'inclinaison vers le bassin de la piscine.
3. Système pour la construction des bords de piscine, selon la revendication 1, **caractérisé en ce que** la partie supérieure rainurée (3) de la première pièce (A) en porcelaine se présente comme un plan horizontal.
4. Système pour la construction des bords de piscine, selon la revendication 1, **caractérisé en ce qu'une** grille (1) directement positionnée sur les ailes (4) de la seconde pièce (B) constituant le canal exutoire (2)

affleure au côté de la pièce (A) qui affleure à la pièce (B).

5. Système pour la construction des bords de piscine, selon la revendication 1, **caractérisé en ce que** le système peut accueillir, entre les pièces (A) et (B) en porcelaine, une troisième pièce (C) en forme de parallélépipède et également en porcelaine dont la surface supérieure est rainurée et forme une extension de la surface supérieure (3) de la première pièce (A). 5 10
6. Système pour la construction des bords de piscine, selon les revendications précédentes, **caractérisé en ce que** les pièces (A) et (B) formant le bord de la piscine peuvent être en dalle de pierre naturelle, en dalle émaillée ou autre. 15
7. Système pour la construction des bords de piscine, selon les revendications précédentes, **caractérisé en ce que** les pièces (A) et (B) formant le bord de la piscine peuvent être en polymère. 20
8. Système pour la construction des bords de piscine, selon la revendication 1, **caractérisé en ce que** la face côté bassin de la première pièce (A) en porcelaine peut être prolongée dans le plan à partir du rebord supérieur arrondi (10). 25
9. Système pour la construction des bords de piscine, selon la revendication 1, **caractérisé en ce que** la face côté bassin de la première pièce (A) en porcelaine présente un renforcement (11) du rebord supérieur arrondi vers la partie intérieure. 30

35

40

45

50

55

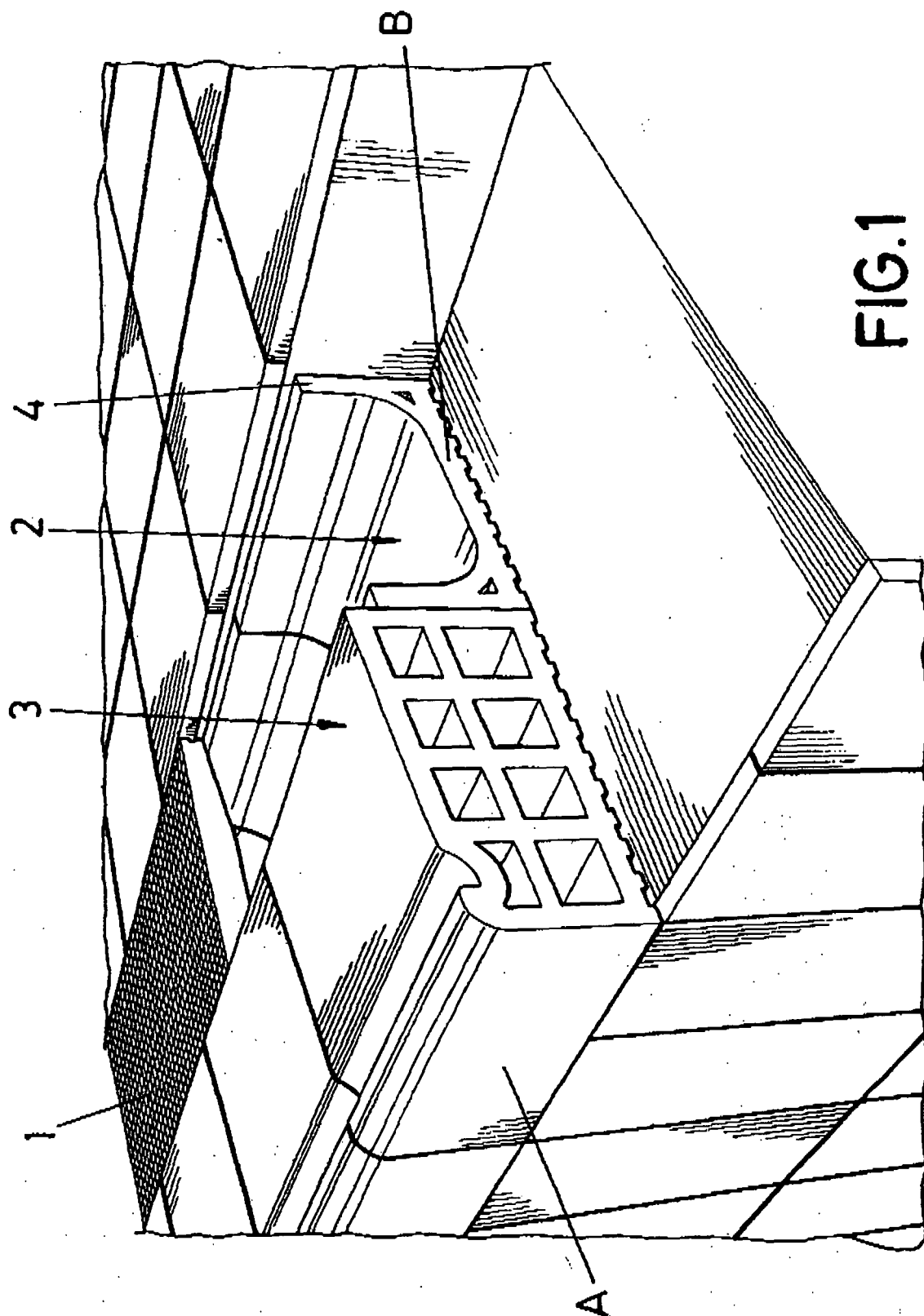
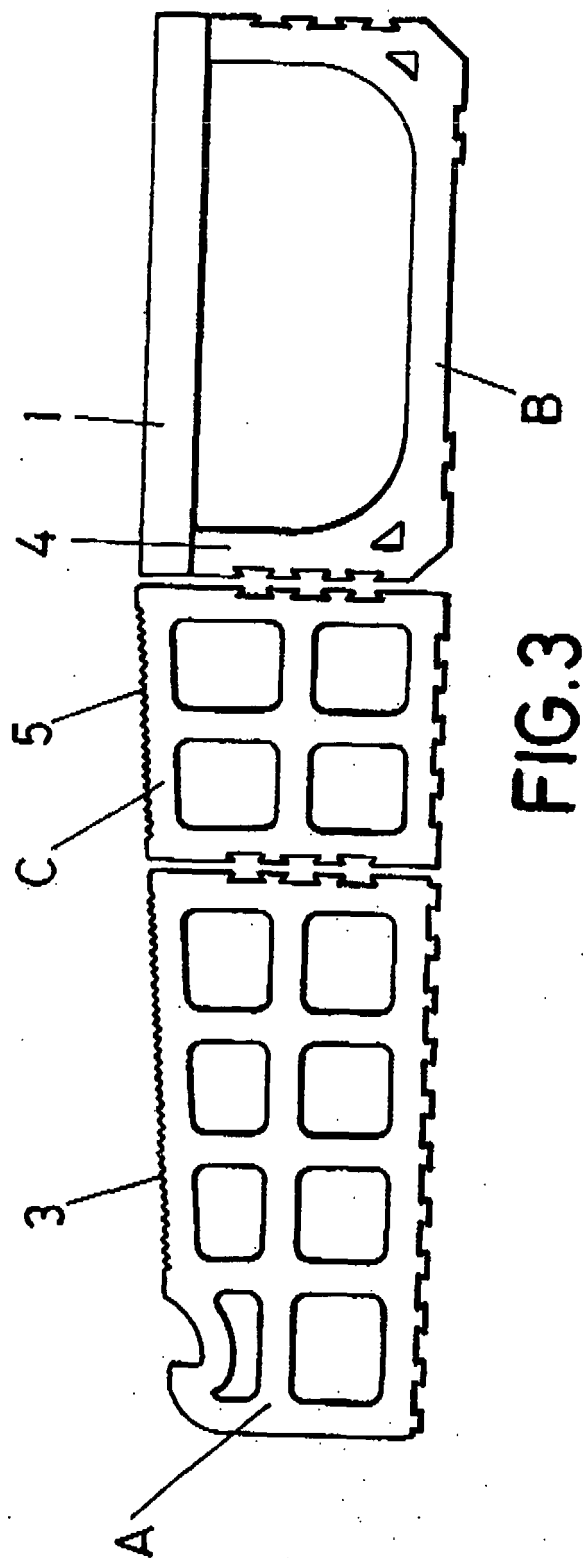
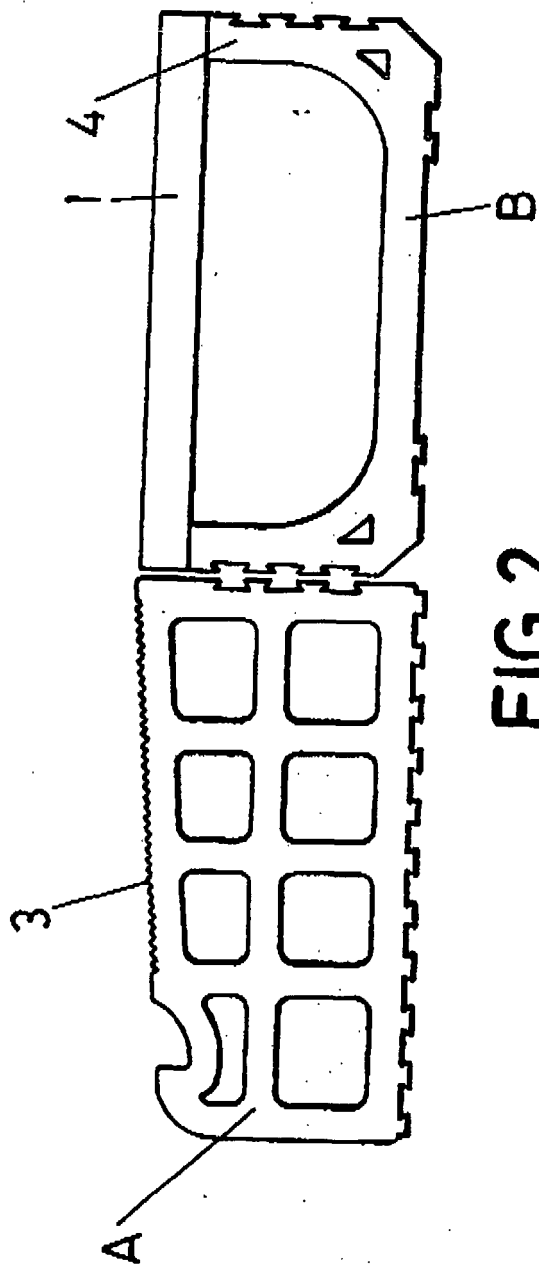


FIG.1



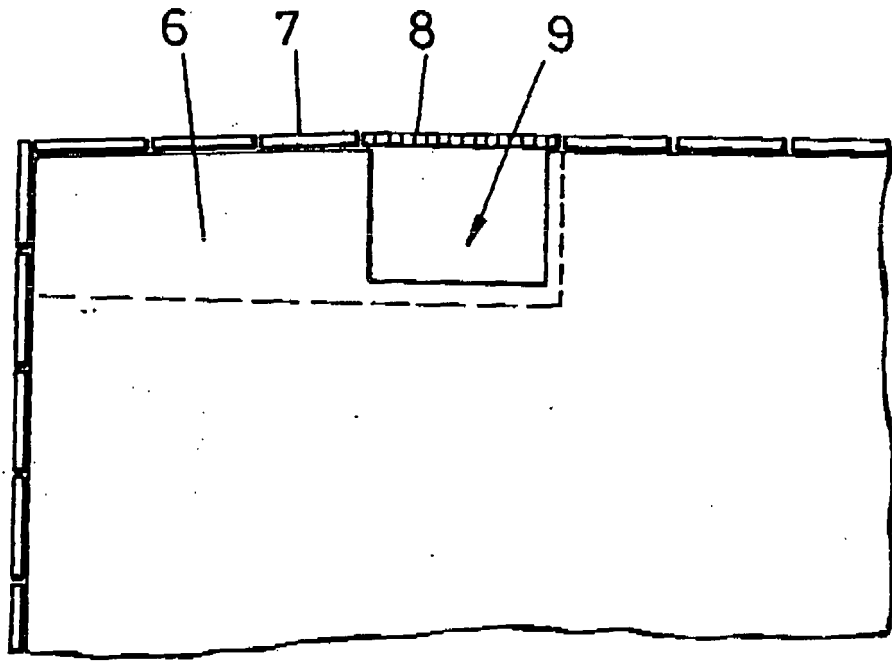


FIG. 4

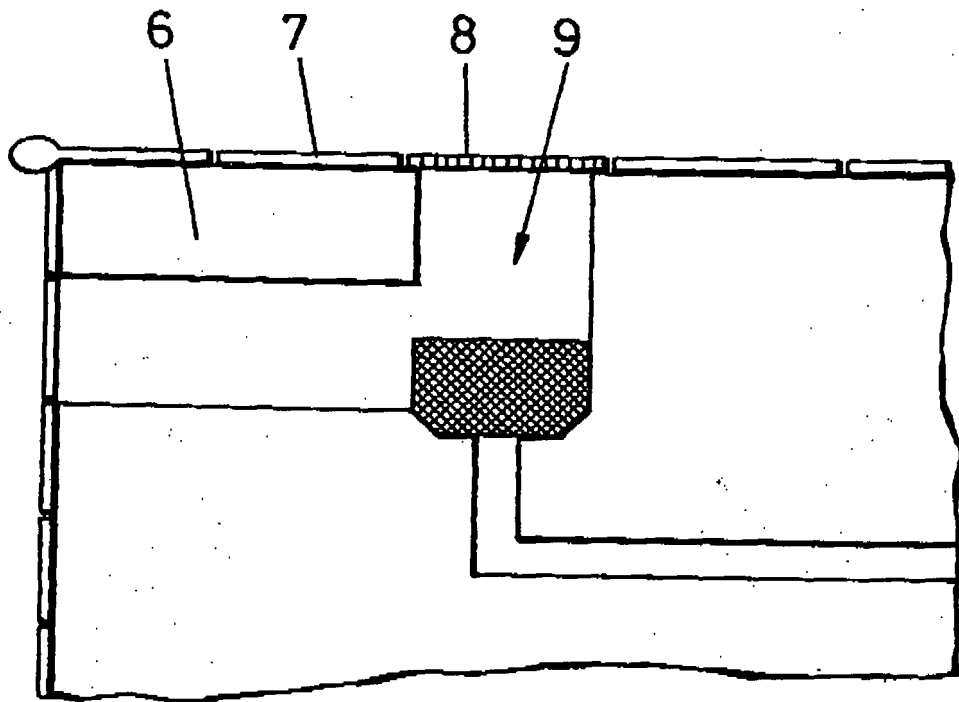
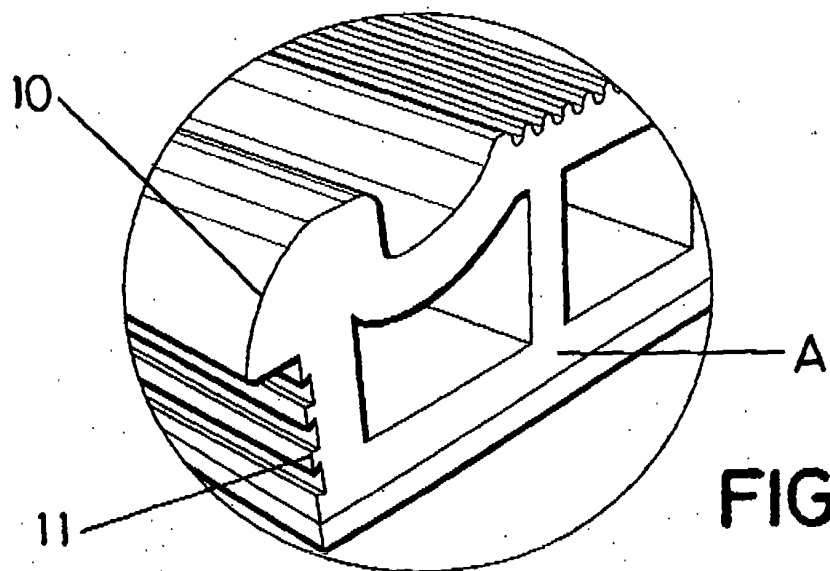
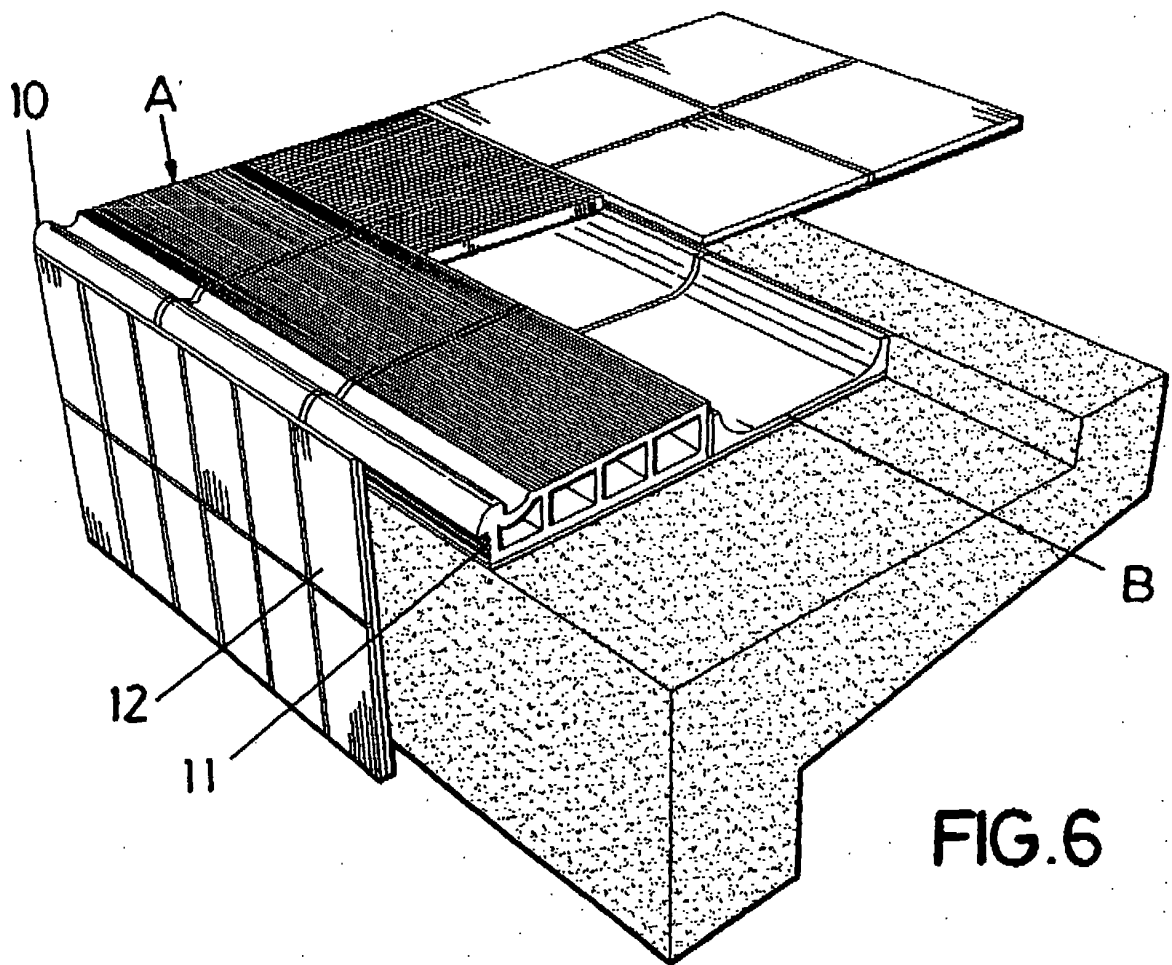


FIG. 5



REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- ES 2257133 A1 [0010]
- FR 2860822 A1 [0011]