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(71) Applicant: **Gerardi, Elio**
41100 Modena (IT)

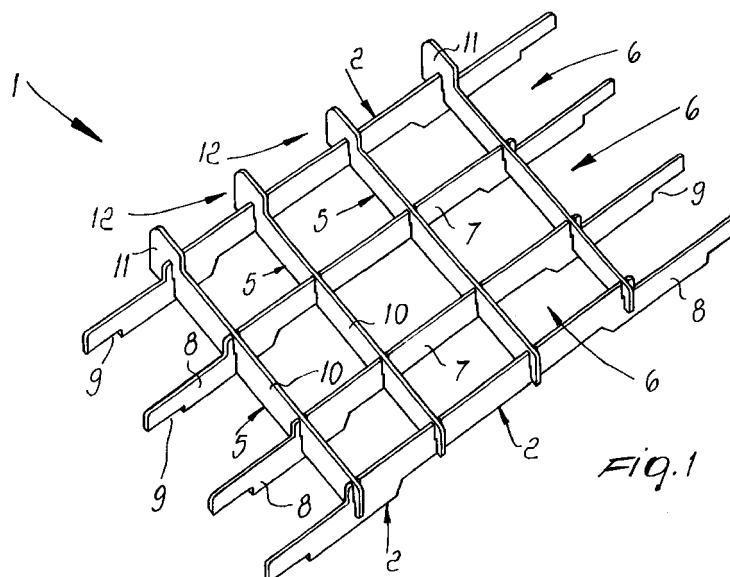
(72) Inventor: **Gerardi, Elio**
41100 Modena (IT)

(74) Representative:
Modiano, Guido, Dr.-Ing. et al
Modiano Gardi Patents,
Via Meravigli, 16
20123 Milano (IT)

(54) **Modular support for supporting building components, particularly roofing tiles and the like**

(57) A modular support for supporting building components, particularly roofing tiles and the like, comprises multiple shaped longitudinal elements (2) which are provided, in an upward region, with a series of slots (3) for interlocking coupling with respective notches (4)

formed at the base of multiple shaped cross-members (5); the cross-members (5) and the longitudinal elements (2) are modular and are adapted to form at least one supporting surface (6) for the building component.



EP 1 016 847 A1

Description

[0001] The present invention relates to a modular support for supporting building components, particularly roofing tiles and the like.

[0002] In the production of roofing tiles and the like conventional movable supports are used for example in firing kilns. On said supports the roofing tiles are rested to be routed to the different steps of the process; these supports are indispensable because of the irregular shape and the deformability of these kinds of building component during the heat treatment process.

[0003] These supports are generally made of refractory material and are constituted by strips of different shapes and dimensions and with varying thicknesses, on which the roofing tiles are arranged.

[0004] Each kind of roofing tile has a particular individual shape and this makes it convenient to use as many supports as there are different types of roofing tiles, or groups of similar roofing tiles, each support being such as to define one or more supporting surfaces, depending on the specific case.

[0005] These supports are not devoid of drawbacks, including the fact that they have a considerable mass which disadvantageously increases the energy costs, have a considerable weight and bulk and require complete replacement if a single part thereof suffers mechanical breakage or wear.

[0006] Moreover, in the case of the production of different kinds of roofing tiles it is necessary to use corresponding supports, with a consequent increase in production costs and in the material employed.

[0007] The aim of the present invention is to eliminate the above-mentioned drawbacks of conventional types of support by providing a modular support for supporting building components, particularly roofing tiles and the like, being particularly lightweight and at the same time strong, so as to reduce production costs, which can be used for roofing tiles having different shapes and dimensions, and allows to reduce the waste of material by allowing to replace the broken or worn-out part without having to fully replace the support.

[0008] Within the scope of this aim, an object of the present invention is to achieve the above-cited aim with a structure which is simple, relatively easy to provide in practice, safe in use, effective in operation and relatively low in cost.

[0009] This aim, this object and others are all achieved by the present modular support for supporting building components, particularly roofing tiles and the like, characterized in that it comprises a plurality of shaped longitudinal elements provided, in an upward region, with a series of slots for interlocking coupling with respective slots formed at the base of multiple shaped cross-members, said cross-members and said longitudinal elements being modular and being adapted to define at least one supporting surface for the building component.

[0010] Further characteristics and advantages of the present invention will become apparent from the following detailed description of a preferred but not exclusive embodiment of a modular support for supporting building components, particularly roofing tiles and the like, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a perspective view of a modular support for supporting building components, particularly roofing tiles and the like, according to the invention; Figure 2 is a front view of a longitudinal element of the support of Figure 1; Figure 3 is a front view of a cross-member of the support of Figure 1.

[0011] With reference to the above figures, 1 generally designates a modular support for supporting building components, particularly roofing tiles and the like.

[0012] The support 1 is constituted by a plurality of shaped longitudinal elements 2 provided, in an upward region, with a series of slots 3 for interlocking coupling with respective notches 4 which are provided at the base of multiple shaped cross-members 5.

[0013] The cross-members 5 and the longitudinal elements 2 are modular and define at least one supporting surface 6 for the clay building component.

[0014] Each longitudinal element 2 comprises a central part 7, in the upper region of which the slots 3 are distributed, and continues, at the ends, with arms 8 which have, in a downward region, respective centering notches 9.

[0015] Each cross-member 5 is constituted by an elongated body 10, in the lower region of which the notches 4 are distributed and which has, at one end, an upper raised portion 11 which forms an elevated supporting region 12 on which a part of the clay building component rests.

[0016] In this manner it is possible to form multiple supporting surfaces for supporting the clay building components, allowing to avoid thermal deformations of the material employed.

[0017] The depth of the slots 4 of the cross-members 5 is equal to the height of the portion 13, located under the slots 3, of the longitudinal elements 2, so that the edges of the cross-members 5 and of the elements 2 that are coupled one another become co-planar and thus define the supporting surface 6.

[0018] The longitudinal element 2 and the cross-member 5 have a slot, designated by the reference numerals 3a and 4a respectively, whose spacing is narrower than the constant spacing with which the other slots 3 and 4 are distributed.

[0019] In the element 2, the slot 3a is one of the two slots arranged at the end of the central part 7, whereas in the cross-member 5 the slot 4a is arranged at the end that lies opposite the end provided with the raised portion 11.

[0020] Advantageously, it is possible to provide supports having various shapes which have different supporting surfaces simply by eliminating one or more cross-members 5 and/or longitudinal elements 2 or by replacing them with others having different heights and shapes.

[0021] Moreover, the support according to the invention does not require complete replacement if one of its components breaks; it simply requires the replacement of the broken cross-member or longitudinal element; all this leads to a reduction in production costs and in the material employed.

[0022] Conveniently, the longitudinal elements 2 and the cross-members 5 are made of a material such as silicon carbide, which allows further lightening of the entire structure and the possible use of multiple mutually stacked supports 1.

[0023] In practice it has been observed that the above-described invention achieves the intended aim and object.

[0024] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the inventive concept.

[0025] Moreover, all the details may be replaced with other technically equivalent ones.

[0026] In practice, the materials employed, as well as the shapes and the dimensions, may be any according to requirements without thereby abandoning the scope of the protection of the appended claims.

[0027] The disclosures in Italian Patent Application No. MO98A000266 from which this application claims priority are incorporated herein by reference.

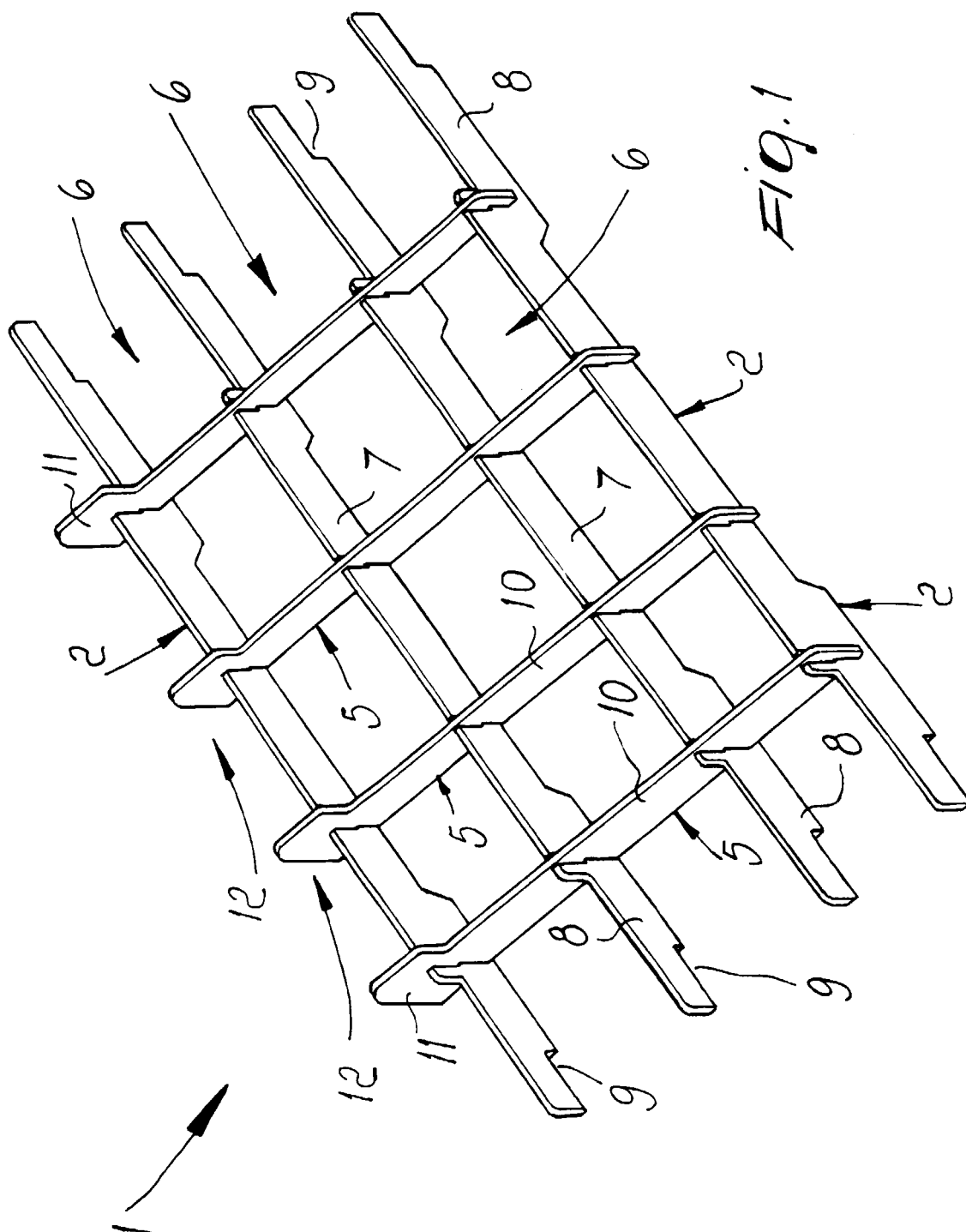
[0028] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

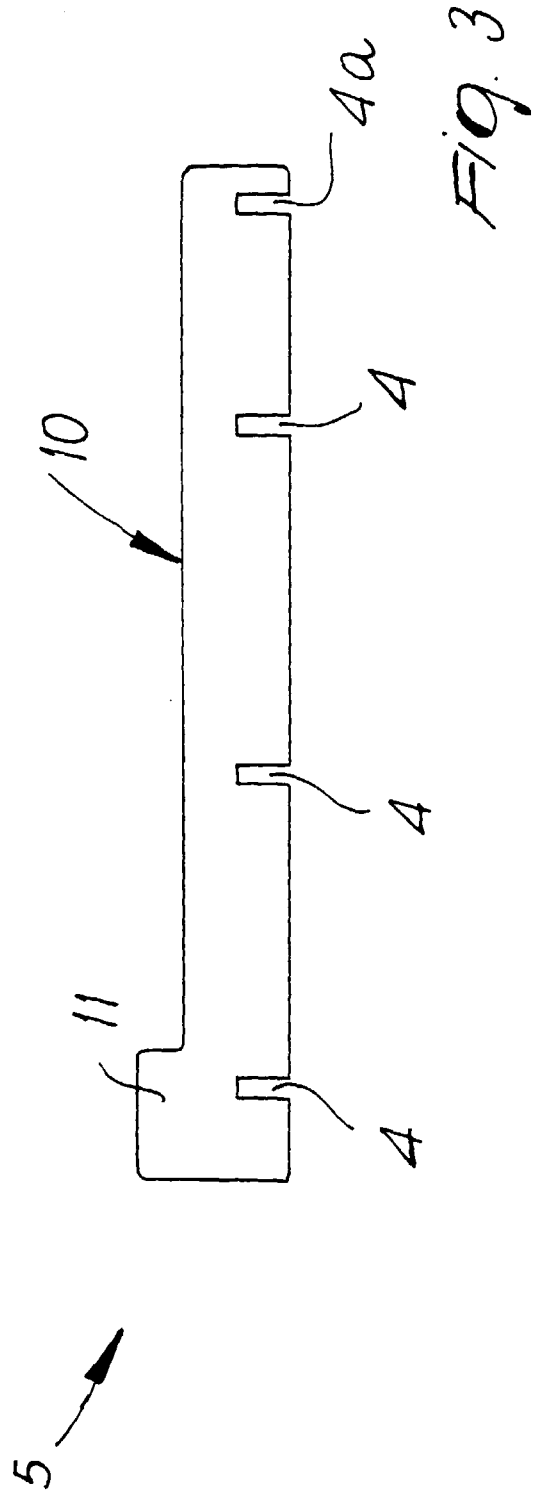
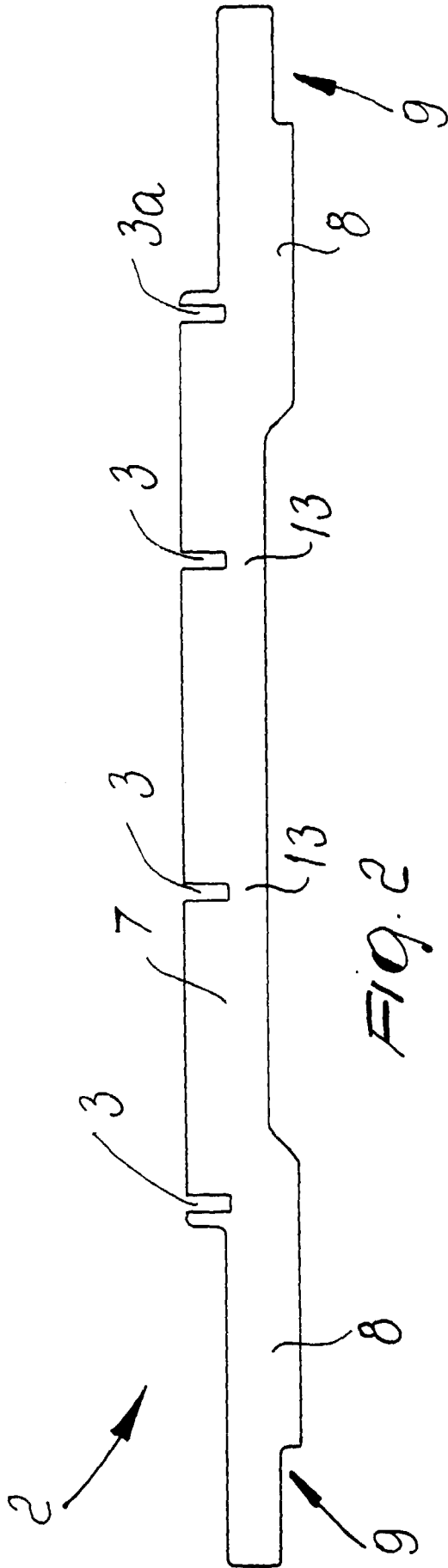
Claims

1. A modular support for supporting building components, particularly roofing tiles and the like, comprising multiple shaped longitudinal elements (2) provided, in an upward region, with a series of slots (3) for interlocking coupling with respective coupling notches (4) formed at the base of multiple shaped cross-members (5), said cross-members (5) and said longitudinal elements (2) being modular and being adapted to form at least one supporting surface (6) for the building component.
2. The support according to claim 1, characterized in that each one of said longitudinal elements (2) comprises a central part (7), on the upper region of which said coupling slots (3) are distributed, and continues, at its ends, with arms (8) which are pro-

vided with respective notches (9) in a downward region.

3. The support according to claim 1, characterized in that each one of said cross-members (5) comprises an elongated body (10) in the lower region of which said coupling notches (4) are distributed and which has, at one end, an upper raised portion (11) which is adapted to form an elevated supporting region (12) for a portion of the building component.
4. The support according to one or more of the preceding claims, characterized in that the depth of the notches (4) of said cross-members (5) is equal to the height of the portion (13) under the slots (3) of said longitudinal elements (2) and is adapted to render the edges of the mutually coupled cross-members (5) and longitudinal elements (2) co-planar and to form said supporting surface (6) for the building component.
5. The support according to one or more of the preceding claims, characterized in that in said longitudinal element (2) at least one (3a) of the coupling slots (3) is arranged with a spacing which is narrower than the constant spacing with which the other slots (3) are distributed.
6. The support according to one or more of the preceding claims, characterized in that in said cross-member (5) at least one (4a) of the coupling notches (4) is arranged with a spacing which is narrower than the constant spacing with which the other notches are distributed.
7. The support according to claim 5, characterized in that the slot (3a) arranged with a narrower spacing is one of the two at the end of said central part (7).
8. The support according to claim 6, characterized in that the notch (4a) arranged with a narrower spacing is at the end that lies opposite the end provided with the raised portion (11) of said cross-member (5).
9. The support according to one or more of the preceding claims, characterized in that said longitudinal elements (2) and said cross-members (5) are made of a material such as silicon carbide.







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EUROPEAN SEARCH REPORT

Application Number
EP 99 12 5950

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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 29 February 2000	Examiner Coulomb, J
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
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