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(11) **EP 1 103 668 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention
of the grant of the patent:

30.06.2004 Bulletin 2004/27

(21) Application number: **00931292.7**

(22) Date of filing: **01.06.2000**

(51) Int Cl.7: **E04D 1/04, E04D 1/30**

(86) International application number:
PCT/ES2000/000192

(87) International publication number:
WO 2000/075454 (14.12.2000 Gazette 2000/50)

(54) **PLANAR-CONVEX TILE**

PLAN-KONVEXE FLIESE

TUILE PLAN-CONVEXE

(84) Designated Contracting States:
ES FR IT PT

(30) Priority: **03.06.1999 ES 9901429 U**

(43) Date of publication of application:
30.05.2001 Bulletin 2001/22

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Description**OBJECT OF THE INVENTION**

[0001] The present invention relates to a roof tile from among mixed tiles with curved and plane surfaces incorporating means of insertion and mutual support, as well as means for guiding rain water, as disclosed, for example, in FR 2 335 670.

[0002] The invention is characterised by a particular construction of the tile, based on four clearly differentiated components, two convex ones and two provided with deep grooves and an inner staggering, as well as consecutively respectively aligned; a raised lateral overlap area; and a reinforcement of the seat in the shore area.

BACKGROUND OF THE INVENTION

[0003] Asymmetric mixed construction planar-convex tiles are widely known, as well as use of their flat area, which is thinner than the convex area as a lateral connection element between said tiles.

[0004] Such roof tiles are generally provided with consecutive transverse double ridges and a further longitudinal end ridge on the flat side in order to gradually stop water which jumps as it is drained to the gutter, a construction which is really functional in the transverse sense as the drip has a simpler construction, but which is more complex for the transverse sense due to the lateral jumps of the water caused by the slope of the roof.

[0005] A further problem is that of piling which is punctual in the base of conventional roof tiles and thus largely unstable during packaging and piling.

[0006] The applicant is not aware of the existence of roof tiles of this sort which solve these problems with the simplicity and ease which is hereunder described.

DESCRIPTION OF THE INVENTION

[0007] The invention object of the present memory relates to a planar-convex roof tile, from among mixed roof tiles with short flat parts and greater curved parts, defining a uniform corrugated roof which incorporating means of insertion and mutual support of the tiles, as well as means of guiding and channelling rain water.

[0008] The invention as defined by the claim has a particular construction of the tile which incorporates four clearly differentiated elements which, as seen from the bottom plane of the tile, are two convex inferiorly open areas on the right and two deeply grooved and inversely open ones, that is, toward the top plane and with an internal staggering, both with respect to the flat area and the convex are of the tile.

[0009] Both pairs of differentiated elements are respectively aligned consecutively along and parallel to the axis of the tile.

[0010] It further incorporates lateral overlapping are-

as raised to at least twice the conventional height, in order to prevent water from entering the roof, with the aid of a ridge of the lower surface of the tile placed on top, next to the free convex end, for support between said raised longitudinal ridge and another of a lower height and paced on the opposite flat end of the next tile, in addition to a reinforcement in the longitudinal seat of the tile with a thickening of the lower shore ridge and two alignments of additional different lateral gusset plates.

DESCRIPTION OF THE DRAWINGS

[0011] As a complement of the description being made and for a better understanding of the characteristics of the invention, the present description is accompanied by a set of drawings where for purposes of illustration only the following is shown:

[0012] Figure 1 shows a view of the top plane of the tile.

[0013] Figure 2 shows a view of the bottom plane of said tile.

[0014] Figure 3 shows two side views, one from the right and one from the bottom, the latter sketched to the front plane.

[0015] Figure 4 shows a sketch of two sections of the tile, a cross section showing the area in which one tile bears on another, fully sectioned and without showing its support on the tray, and another drawing of a longitudinal section along the axis of the deep consecutive grooves.

PREFERRED EMBODIMENT OF THE INVENTION

[0016] In view of the above, the present invention relates to a planar-convex roof tile from among mixed tiles which incorporate means of insertion and mutual support between tiles, as well as further means for guiding and channelling rain water, wherein in the eave is continuous and without setbacks along the transverse alignment of the roof channels and ridge tiles, as it incorporates four clearly differentiated components, two convex components (1) open on the bottom and two deeply grooved components (2) open on the top, all placed internally staggered and consecutively aligned with respect to the longitudinal tile axis, as well as with the grooves (2) placed central to nearby staggerings, (12) of the tile flat end (8) and (13) of the convex end.

[0017] A ridge (3) of the bottom surface (4) next to the free convex end (5) is interposed between a doubly raised lateral overlap (6) in order to improve the water tightness of the roof and a further ridge (7) also longitudinal of flat end (8) of the next tile, completed by a thickening of the lower shore ridge (9) and two alignments of two different sets of additional lateral gusset plates (10) and (11) and continuous and uniform supports along the entire length of the tile, which allow an improved load distribution in piling and improve stability of the packag-

ing, and finally, define a continuous, setback free arrangement of ends of ridge tiles and consecutive aligned grooves (2).

[0018] The essence of this invention is unaltered by variations in materials, shape, size and arrangement of the component elements described in a non-limiting manner, and sufficient for reproduction by an expert in the field.

Claims

1. Planar-convex roof tile, from among the mixed roof tiles which incorporate means of insertion and mutual support between them, as well as further means for guiding and channelling rain water and where, when the said roof tiles are placed as a roof; the eave is continuous and without setbacks along the transverse alignment of the roof channels and ridge tiles,

characterised in that

the roof tile incorporates four clearly differentiated components:

- two convex components (1) open to the bottom, consecutively placed along and aligned with respect to the longitudinal tile axis and, besides them,
- two deeply grooved components (2) open to the top, also consecutively placed along and aligned with respect to the longitudinal tile axis,

all components being placed internally staggered; wherein the grooves of the grooved components (2) are placed central between nearby staggerings:

- one staggering (12) at an horizontal flat end (8) of the roof tile provided at the free end side of the grooved components (2),
- and the other staggering (13) at the end of the convex component (1) joining with the grooved component (2);

wherein, for the roof tile to bear on another like roof tile, a ridge (3) is provided at the bottom surface (4) of the convex elements (1) next to their free end (5), and the horizontal flat end (8) is further provided with

- a doubly raised lateral overlap (6) and
- a further also longitudinal single raised ridge (7) on it,

so that the said ridge (3) can be interposed between the overlap (6) and the raised ridge (7); the horizontal flat end (8) further having

- a thickened lower shore ridge (9) below it with

- two alignments of two different sets of additional lateral gusset plates (10 and 11);

the flat-roof tile further having continuous and uniform supports along its entire length, and further allowing to define a continuous, setback free arrangement of the ends of the ridge tiles and consecutive aligned deep grooves when placed.

Patentansprüche

1. Plankonvexe Dachziegel von den gemischten Dachziegeln, die über Mittel zur Einführung und gegenseitigen Halterung zwischen ihnen verfügen, sowie über Mittel zum Leiten und Kanalisieren von Regenwasser und bei denen, wenn die besagten Dachziegel auf dem Dach angebracht werden, die Traufe durchgängig ist und keine Rücksprünge entlang der Queranordnung der Dachrinnen und den Firstziegeln aufweist,

dadurch gekennzeichnet, dass

die Dachziegel vier klar differenzierte Komponenten aufweist:

- zwei konvexe Komponenten (1), die nach unten offen sind und nacheinander entlang und ausgerichtet mit der Längsachse des Firsts angebracht werden,
- zwei tief genutete Komponenten (2), die nach oben offen sind und gleichermaßen entlang und ausgerichtet mit der Längsachse des Firsts angebracht werden,

wobei alle Komponenten unter sich abgestuft angebracht werden;

wobei die Nuten der genuteten Komponenten (2) mittig zwischen nahegelegenen Abstufungen angebracht werden:

- eine Abstufung (12) an einem waagerechten, flachen Ende (8) der Dachziegel, die an der freien Endseite der genuteten Komponente (2) vorgesehen ist
- und die andere Abstufung (13) am Ende der konvexen Komponente (1), wo es auf die genutete Komponente (2) stösst;

wobei, damit die Dachziegel eine andere gleiche Dachziegel aufnehmen kann, ein First (3) auf der unteren Oberfläche (4) des konvexen Elements (1) neben deren freien Ende (5) vorgesehen ist und das waagerechte, flache Ende (8) ausserdem über Folgendes verfügt:

- eine doppelt erhabene seitliche Überlagerung (6) und
- einen weiteren, ebenso länglichen einfachen

erhobenen First (7) darauf,

so dass der besagte First (3) zwischen die Überlagerung (6) und dem erhobenen First (7) positioniert werden kann;

das waagerechte flache Ende (8) verfügt ausserdem über

- einen verdickten, unteren Stützfist (9) darunter mit
- zwei Anordnungen unterschiedlicher Gruppierungen von zusätzlichen seitlichen Verstärkungsplatten (10 und 11);

die Flachdachziegel verfügen ausserdem über durchgehende und gleichförmige Halter auf ihrer gesamten Länge und erlauben ausserdem die Ausbildung eine durchgehenden Anordnung ohne Rücksprünge an den Enden der Firstziegel und die Anordnung von tieren Nuten nacheinander, wenn sie angebracht werden.

Revendications

1. Tuile convexe plane, du type des tuiles mixtes qui incorporent des moyens d'insertion et de support mutuel entre elles, ainsi que des moyens pour guider et canaliser l'eau de pluie et où, lorsque les dites tuiles sont mises en place sous forme de toiture, le vol-à-faux est continu et sans retraits le long de l'alignement transversal des canaux de toit et des tuile de faîte

caractérisé en ce que

la tuile incorpore quatre composants nettement différenciés :

- deux composants convexes (1) ouverts sur la partie inférieure, mis en place consécutivement le long de et alignés par rapport à l'axe longitudinal des tuile, et à côté de celles-ci.
- deux composants profondément rainurés (2) ouverts sur la partie supérieure, également mis en place le long de et alignés par rapport à l'axe longitudinal des tuiles

tous les composants étant mis en place de manière intérieurement échelonnée :

où les rainures des composants rainurés (2) sont mis en place entre les échelonnements attnants:

- un échelonnement (12) à une extrémité plane horizontale (8) de la tuile étant prévu du côté de l'extrémité libre des composants rainurés (2),
- et l'autre échelonnement (13) étant prévu à l'extrémité d u composant convexe (1) s'unis-

sant avec le composant rainuré (2):

où , pour que la tuile soit disposée sur une autre tuile, une nervure (3) est prévue sur la surface inférieure (4) des éléments convexes (1) attenants à leur extrémité libre (5), et l'extrémité plane horizontale (8) est également pourvue d'

- un recouvrement latéral doublement relevé (6)
- une nervure longitudinale relevée (7) sur celui-ci

de manière que ladite nervure (3) peut être interposée entre le recouvrement (6) et la nervure relevée (7);

l'extrémité plane horizontale (8) ayant également

- une nervure de rive inférieure épaissie (9) en dessous d'elle avec
- deux aligenements de deux ensembles différents de raccords à goussets (10et11);

la tuile plane ayant des supports continus et uniformes le long de toute sa longueur, en permettant également de définir un aménagement continu libre de retraits des extrémités des tuiles de faîte et des rainures consécutives et profondes alignées lors de leur mise en place.

FIG. 1

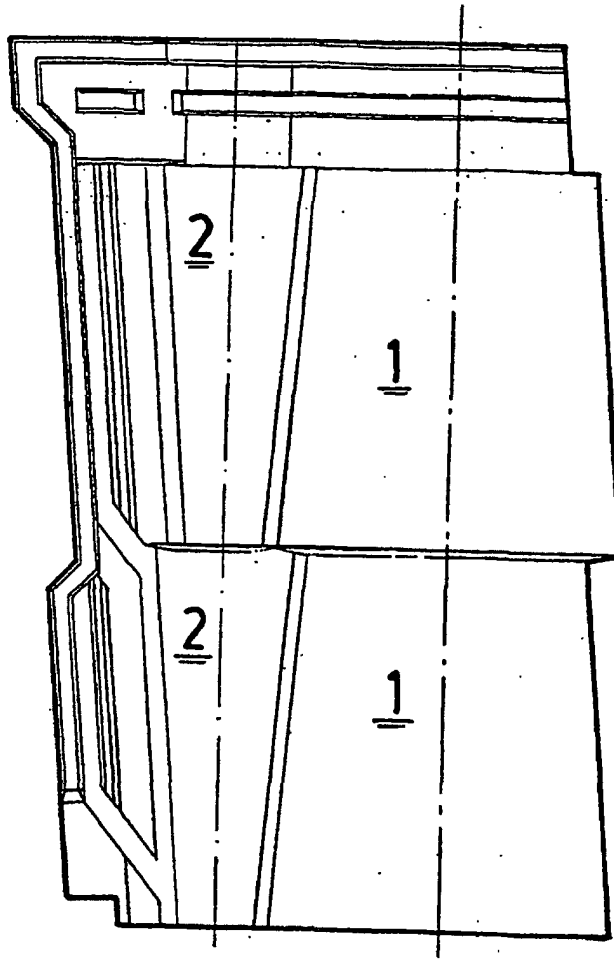


FIG. 2

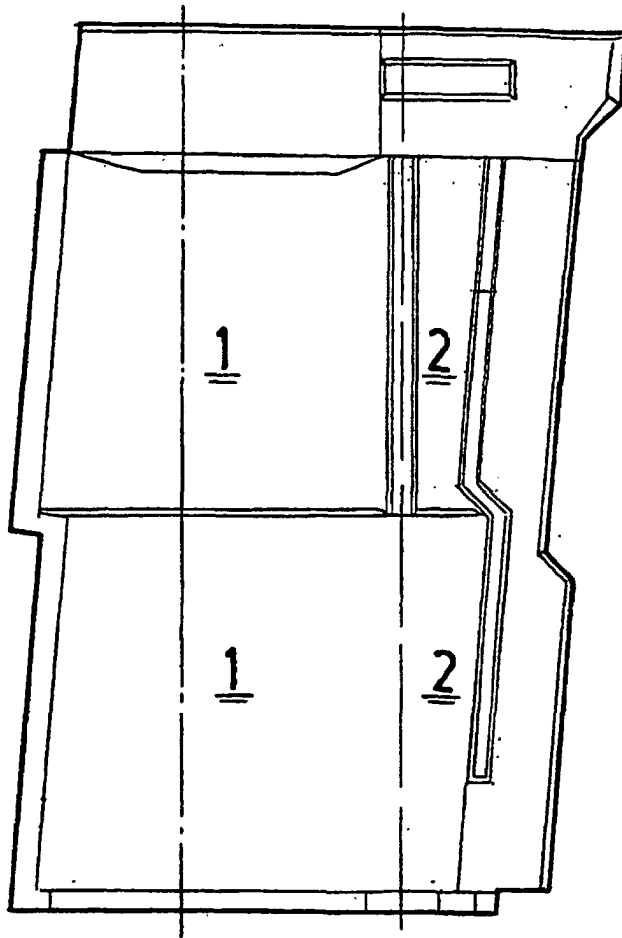


FIG. 3

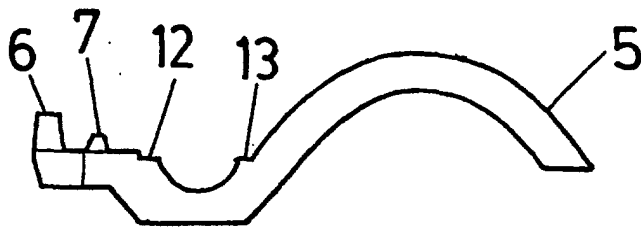
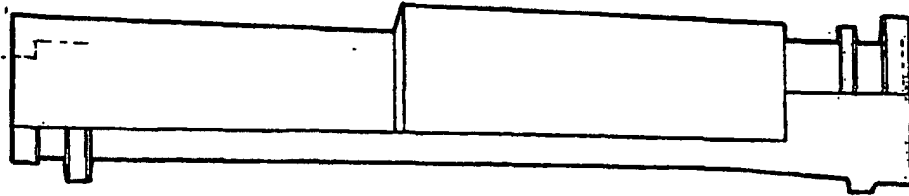


FIG. 4

