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(54) Roofing tile.

(57) Roofing tile (1) having a central body (2) which defines a concave surface (3) and which is provided at one end with a wall (4) and engagement means (8a,8b) for an overlying ridge tile.

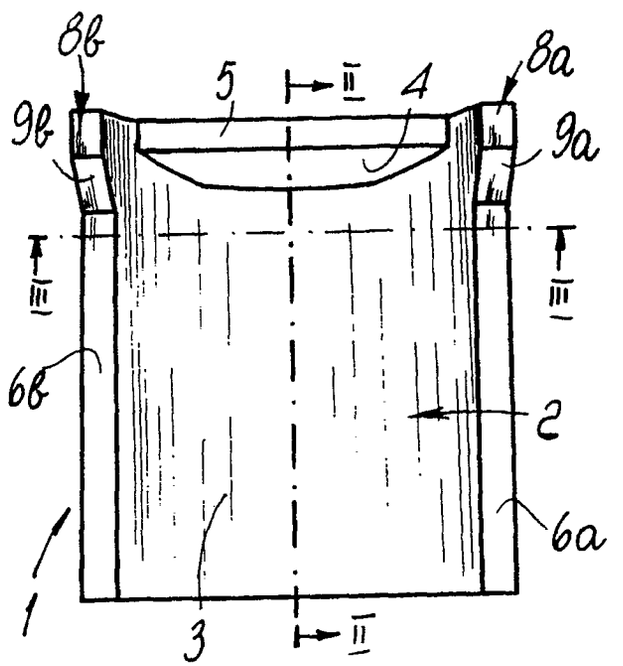


Fig. 1

EP 0 428 122 A1

ROOFING TILE

The present invention relates to a roofing tile which can be particularly used for completing the roof at the ridge thereof.

The use of gutter tiles and covering tiles, having a central body which has a concave configuration in transverse cross section and a structure which is tapered at one end, is currently known.

Gutter tiles are usually laid side by side on parallel lines starting from the ridge, and covering tiles are laid thereon.

Ridge tiles are placed at the ridge line, above the gutter tile ends which at this portion, are not surmounted by the covering tiles, and are usually secured with mortar; their function is to convey rainwater onto the underlying gutter tiles.

The gutter tiles, however, can move along their own longitudinal axis, sliding on the pitch of the roof until the infiltration of water is allowed.

Devices suitable for allowing the ventilation of the roof, constituted by supporting frames for the gutter tiles, are also known; said gutter tiles are fixed to the frame by means of nails or screws which pass at adapted holes defined on the tapered end of the gutter tile itself.

However, the use of said frames, which allow to keep the tiles in stable position, creates disadvantages: at the ridge line it is in fact observed that the flow of air for ventilating the roof, which affects said roof from the end adjacent to the gutter up to the ridge, creates vortices which prevent the normal drainage of the water from the ridge tile into the underlying gutter tiles.

The need to secure the gutter tiles to the frame furthermore entails perforating said tiles and using screws to secure them; this therefore entails further processing and increases installation time.

The aim of the present invention is therefore to eliminate the disadvantages described above in known types by providing a roofing tile which, when used together with roof ventilation frames, allows the optimum drainage of the water from the ridge tile to the gutter tiles.

Within the scope of the above described aim, an important object is to provide a roofing tile which is associable in a rapid, simple and stable manner at the ridge tile.

Another object is to provide a roofing tile which can be installed even by not particularly skilled personnel.

Another object is to provide a roofing tile which is easy to industrialize.

Not least object is to provide a roofing tile which associates with the above characteristics that of having modest manufacturing costs.

This aim, these objects and others which will become apparent hereinafter are achieved by a roofing tile, as defined in the appended claims.

Further characteristics and advantages of the invention will become apparent from the detailed description of a particular embodiment, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is a top view of the roofing tile according to the invention;

figure 2 is a sectional front elevation view of the roofing tile taken along the plane II-II of figure 1;

figure 3 is a sectional side elevation view of the roofing tile taken along the plane III-III of figure 1;

figure 4 is a sectional front elevation view, taken at a roof ridge line, of the use of the roofing tile according to the invention;

figure 5 is a partially sectional side elevation view of the arrangement of the roofing tile according to the invention;

figure 6 is a lateral perspective view of a roofing tile according to the invention, which can be applied at a diagonal ridge line (hip);

figure 7 is a sectional front elevation view of the roofing tile shown in figure 6 taken along the plane VII-VII of figure 6.

With reference to the above figures, the roofing tile, according to the present invention, generally indicated by the reference numeral 1, is constituted by a central body 2 which has a concave surface 3 in transverse cross section.

A partition means or wall 4 protrudes approximately perpendicular to the concave surface 3 at an end of the central body 2 and affects the entire transverse extension of said central body 2.

The wall 4 advantageously has such a height that its upper perimetric edge 5 is arranged below the plane of arrangement of the longitudinal perimetric edges 6a and 6b of the central body 2.

A temporary engagement means for a ridge tile 7 is provided on each of said longitudinal perimetric edges 6a and 6b at the end of the central body 2 which has the wall 4.

Said engagement means are constituted by a tooth, indicated by the reference numerals 8a and 8b, which protrudes from the respective longitudinal perimetric edges 6a and 6b and is blended therewith along an inclined plane indicated by the numerals 9a and 9b.

The use of the roofing tile 1 according to the invention is mostly advantageous if one uses devices suitable for allowing the ventilation of the roof, such as a wood frame 10 associated with the roof top, with which the ridge tiles 7, the covering tiles 13 and the gutter tiles 14 are associable by

means of screws 12.

In this case the roofing tile 1 is arranged by partially resting its outer lateral surface 15 on two underlying and adjacent covering tiles 13, so as to arrange it approximately along the same longitudinal axis as an underlying gutter tile 14.

The roofing tile 1 must be arranged so that its end provided with the wall 4 protrudes slightly beyond the end of the underlying gutter tile 14 with the teeth 8a and 8b directed toward the overlying ridge tile 7.

The roofing tile 1 and the ridge tile 7 are thus arranged approximately perpendicular to one another, the teeth 8a and 8b interacting with the ridge tile 7 proximate to a longitudinal perimetric edge 16 thereof.

This allows the arrangement of the wall 4 in a region underlying the ridge tile 7.

In this manner the flow of the air 17 optimally affects the roof top, the gutter tiles and the ridge tile, as illustrated in figure 4, whereas the presence of the wall 4 prevents any water which falls from the ridge tile onto the underlying roofing tile 1 from dripping onto the roof top.

The roofing tile therefore forces the water, despite the presence of the flow of air, to flow toward the gutter.

As regards the shape of the roofing tile, depending on whether it is combined with a ridge tile arranged at the crest of the roof or at an inclined portion or hip thereof for connecting to the roof top, said shape is the one illustrated respectively in figures 1 and 6.

From the latter figure, together with figure 7, it can be seen that the hip roofing tile has an oblique configuration of the end provided with the wall 4, in order to follow the arrangement along the hip line of the underlying gutter tiles and covering tiles.

It has thus been observed that the invention has achieved the intended aim and objects, a roofing tile having been obtained which can be associated in a stable manner with the ridge tile though it can be subjected to minor adjustments which in any case do not compromise its integrity.

The roofing tile furthermore allows the optimum ventilation of the roof and at the same time allows the optimum draining of rainwater from the ridge tile to the underlying gutter tiles.

The application of the roofing tile is easy and rapid; it must be laid between two covering tiles at a gutter tile, superimposing on said roofing tile a ridge tile which secures it due to the presence of the engagement means.

The materials employed, as well as the dimensions which constitute the individual components of the roofing tile, may naturally be the most pertinent according to the specific requirements.

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 scope of each element identified by way of example by such reference signs.

Claims

1. Roofing tile, comprising a curved central body (2) having a concave surface (3) in transverse cross section, characterized in that it has, at one end, a wall (4) which protrudes approximately perpendicular to said concave surface (3) and, at the perimetric edges (6a,6b), at least one temporary engagement means (8a,8b) for an overlying ridge tile (7), said roofing tile being interposable between a ridge tile (7) and an underlying pair of covering tiles (13), at a gutter tile (14).

2. Roofing tile according to claim 1, characterized in that said at least one engagement means (8a,8b) allows to temporarily associate said roofing tile with a ridge tile (7) proximate to a longitudinal perimetric edge (16) of the latter.

3. Roofing tile according to claims 1 and 2, characterized in that said wall (4) affects the entire transverse extension of said central body (2) and advantageously has such a height that its upper perimetric edge (5) is arranged below the plane of arrangement of the longitudinal perimetric edges (6a,6b) of said central body (2).

4. Roofing tile according to claims 1 and 3, characterized in that a temporary engagement means for a ridge tile (7) is provided on each of said longitudinal perimetric edges (6a,6b) at the end of said central body (2) which has said wall (4), each of said engagement means being constituted by a tooth (8a,8b) which defines an inclined plane (9a,9b) extending from said longitudinal perimetric edges (6a,6b).

5. Roofing tile according to claims 1 and 4, characterized in that once it is associated with devices suitable for allowing the ventilation of the roof, such as a wood frame (10) which is coupled to the roof top and with which the ridge (7), covering (13) and gutter tiles (14) are associable by means of screws (12), it partially rests its outer lateral surface (15) on two underlying and adjacent covering tiles (13), so as to arrange itself approximately along the same longitudinal axis as an underlying gutter tile (14).

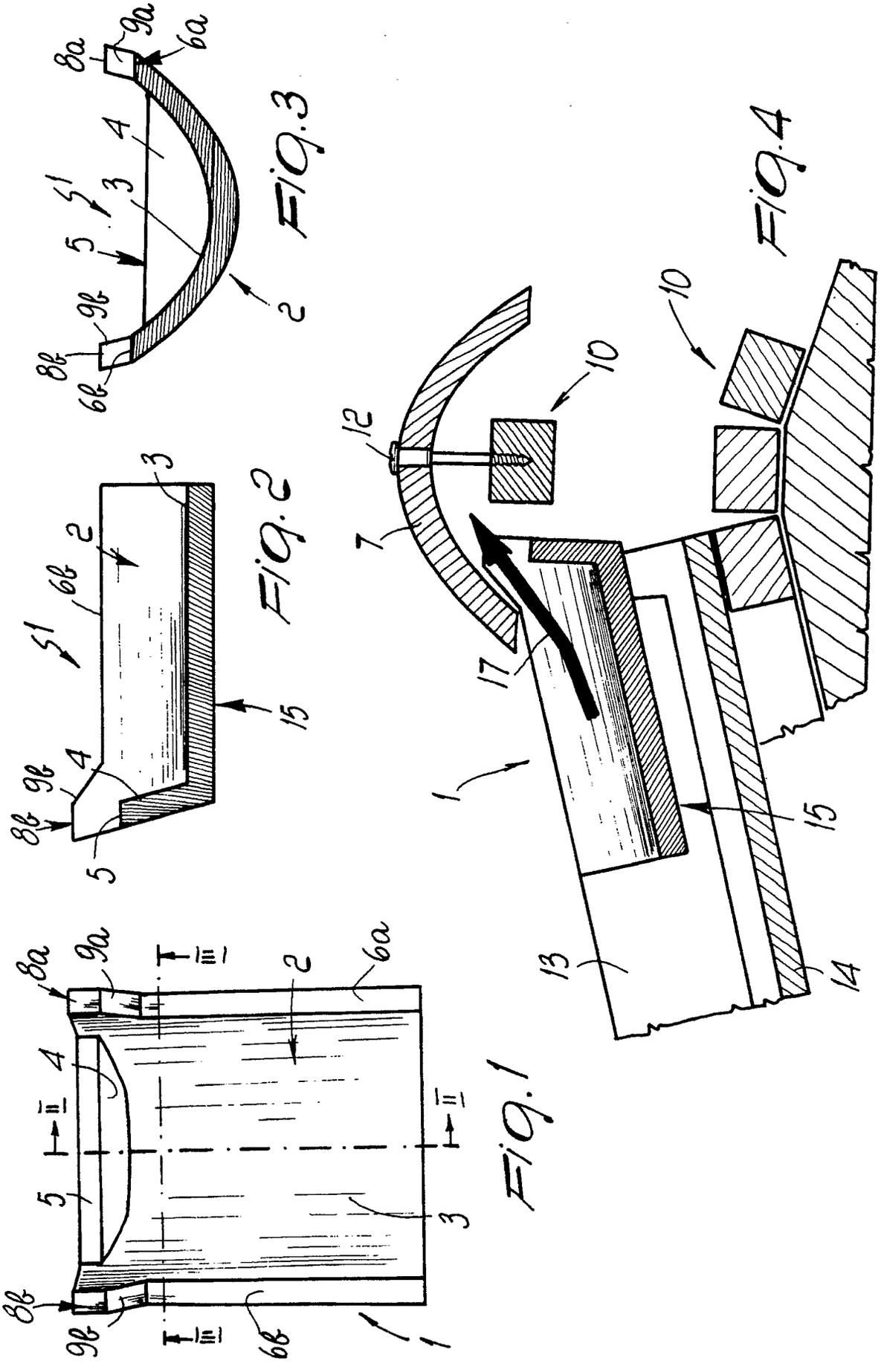
6. Roofing tile according to claims 1 and 5, characterized in that it is arranged so that its end provided with said wall (4) protrudes slightly beyond that of the underlying gutter tile (14) with said teeth (8a,8b) directed toward the overlying ridge

tile (7) , said teeth (8a,8b) interacting with said ridge tile (7) proximate to a longitudinal perimetric edge (16) thereof.

7. Roofing tile according to claims 1 and 6, characterized in that said wall (4) is arranged in a region underlying said ridge tile (7), said wall (4) preventing the water which is pushed by the flow of air (17) from falling onto the roof top, conveying it instead onto a gutter tile (14).

8. Roofing tile according to claims 1 and 7, characterized in that the end provided with said wall (4) can have an axis which is parallel or inclined with respect to the transverse axis of said roofing tile.

9. Roofing tile comprising a curved central body (2) having a concave surface (3) in transverse cross section, characterized in that it is provided at at least one end thereof with temporary engagement means (8a,8b) for an overlying ridge tile (7).


8a
9a
6a
4
3
5
5'
9b
8b
6b
2
Fig.3
3
6b
2
5'
15
4
9b
8b
5
Fig.2
8a
9a
II-II
2
6a
4
II-II
5
II-II
3
8b
9b
II-II
6b
1
Fig.1
10
12
7
10
17
1
15
13
14
Fig.4

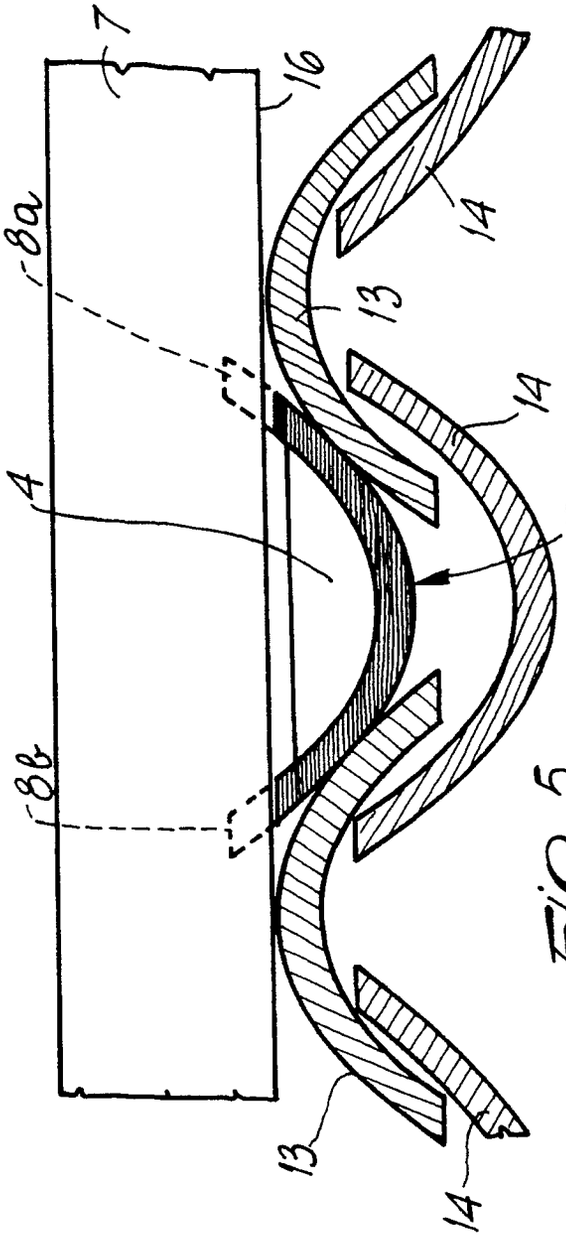


Fig. 5

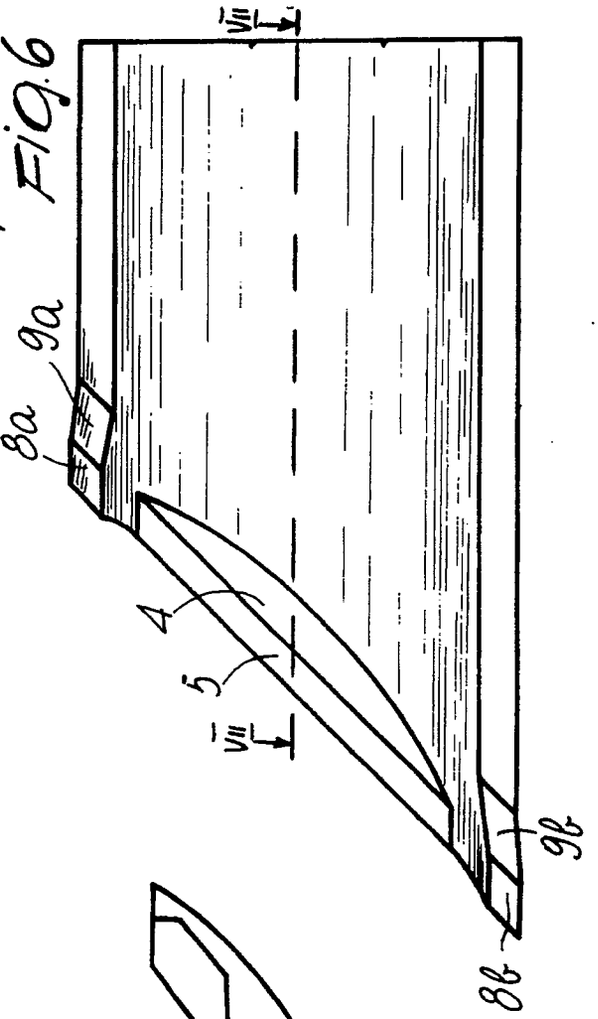


Fig. 6

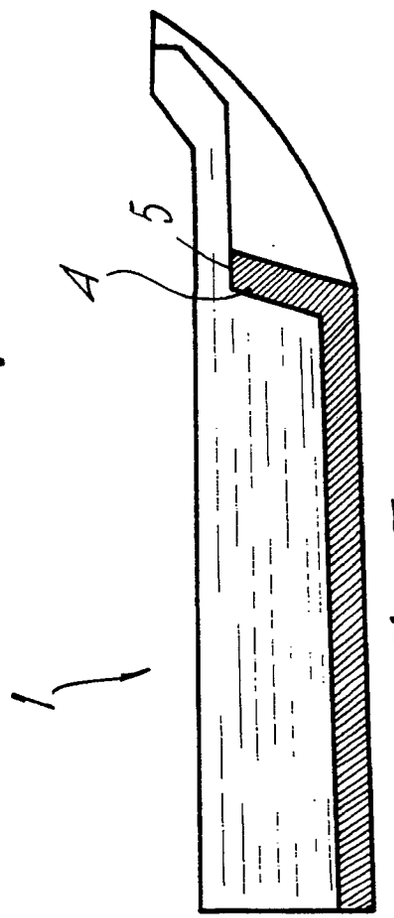


Fig. 7

European Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 90 12 1667

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.5)
Y	FR-A-2 514 390 (LAMBERT CERAMIQUES) * page 2, lines 6 - 39; figures *	1-9	E 04 D 1/30
Y	FR-A-2 528 479 (TUILERIES MARLEY BETOPAN) * page 2, lines 21 - 40; figure 1 *	1-9	
A	FR-A-2 195 986 (TUILERIES DE MARSEILLE) * page 2, line 34 - page 3, line 17 * * page 3, lines 30 - 33; figures 1, 2, 6 *	1,7,9	
A	FR-A-2 594 159 (P. TALOU) * page 9, line 32 - page 10, line 29; figures 10, 12 *	1,9	
A	DE-C-2 629 14 (H. MARTINI)	-	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

E 04 D

The present search report has been drawn up for all claims

Place of search	Date of completion of search	Examiner
The Hague	01 February 91	KRIEKOUKIS S.

CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone
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