Nov. 30, 1965 L. L. BESSE 3,220,150

REVERSIBLE ROOF TILES

Filed Dec. 17, 1962 2 Sheets-Sheet 1

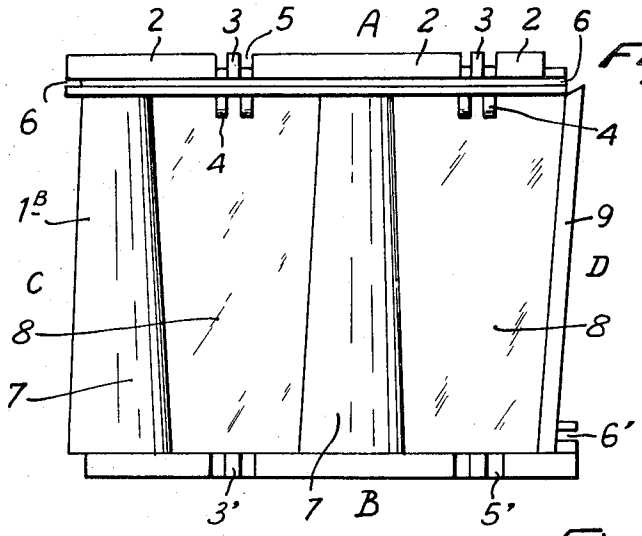


Fig. 1

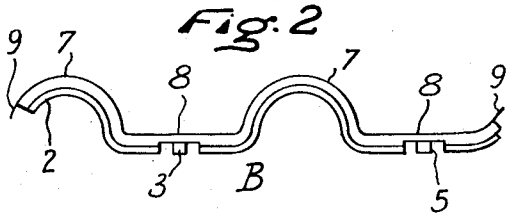


Fig. 2

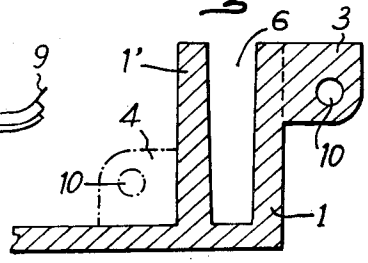


Fig. 3

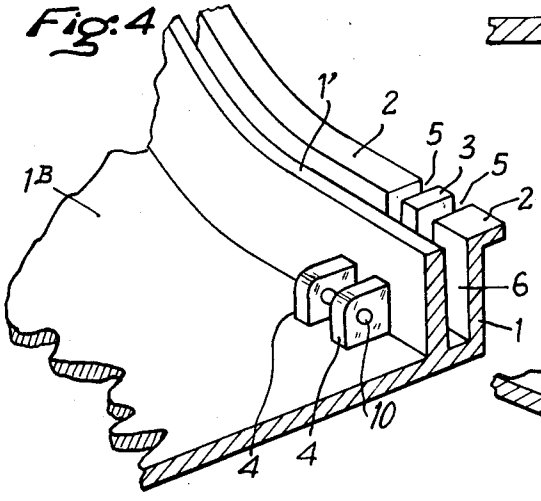


Fig. 4

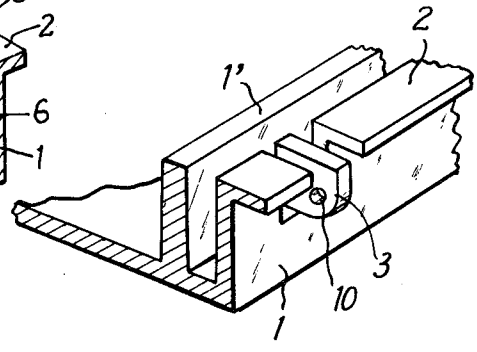


Fig. 5

INVENTOR
LOUIS LUCIEN BESSE
By Irwin S. Thompson
ATTY.

Nov. 30, 1965 L. L. BESSE 3,220,150

REVERSIBLE ROOF TILES

Filed Dec. 17, 1962 2 Sheets-Sheet 2

Fig. 6

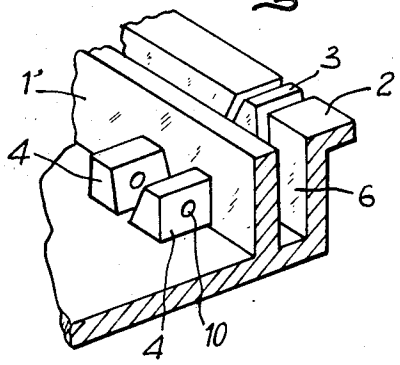


Fig. 7

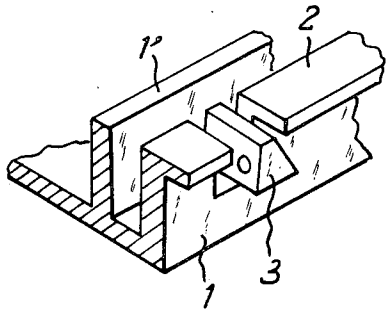


Fig. 8

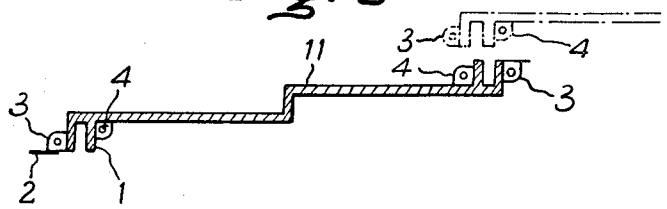
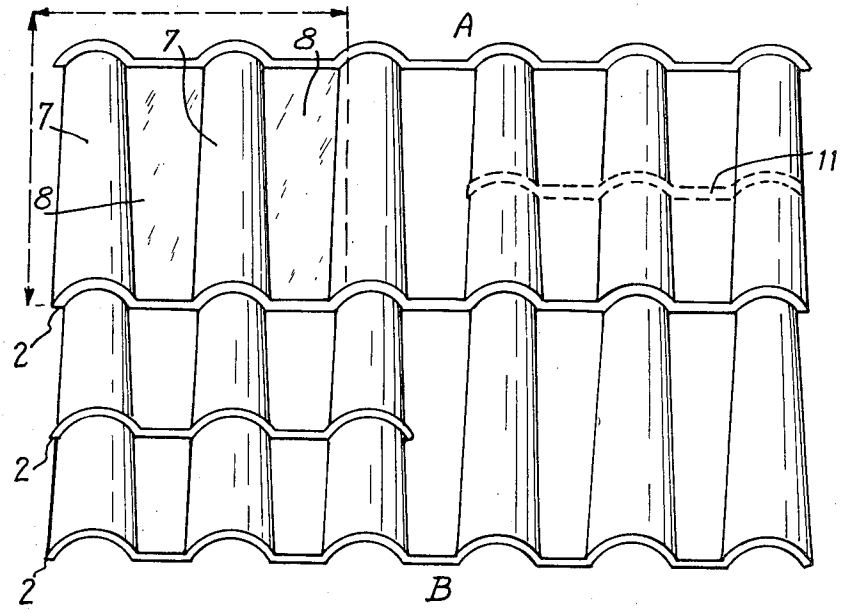


Fig. 9



INVENTOR

LOUIS LUCIEN BESSE

BY Irwin S. Thompson

ATTY.

United States Patent Office 3,220,150 Patented Nov. 30, 1965

3,220,150

REVERSIBLE ROOF TILES

Louis Lucien Besse, Liguge (Vienne), France

Filed Dec. 17, 1962, Ser. No. 245,265
4 Claims. (Cl. 52—538)

The present invention relates to roofing tiles made of plastic or other material either by molding or by injection.

An object of this invention is to make a tile of light construction that will enable the roof to be lighter and the framework for supporting the same to be lighter.

Another object of this invention is to provide a reversible roofing tile constructed for assemblage to prevent the penetration of rain or moisture between the joints, while still being resistant to the most violent winds.

A further object of this invention is to provide interlocking attaching lugs on the tiles during the course of the manufacture thereof.

Still another object of the invention is to provide a roofing tile having tenons and lugs formed with openings adapted to register when the tenons of one tile cooperate with the lugs of an adjacent tile to enable the insertion in the registering openings of a pin or peg, a fastener or an iron wire so that the tiles can be connected together with a water and heat seal between the tiles and to enable the tiles to be fastened to the roofing frame to retain them against the effects of wind.

A still further object of this invention is to provide tenons of dovetail form and lugs of corresponding form to receive the same.

Still another object of this invention is to provide a tile having double flanges at each end and laterally projecting flanges at the sides adapted to slightly overlap the edges of adjacent tiles without disconnecting the tiles.

Yet another object of this invention is to provide ribs or grooves in the tile in order to form for assemblage larmiers where shoulders of cornices force the rain water to flow in drops resembling tears in place of trickling over the facing.

Other objects will appear hereinafter and in the drawings which show by way of example, and somewhat schematically, modifications of tiles constructed according to the present invention and assemblages thereof.

In the drawings:

FIG. 1 is a plan view of a reversible tile according to the present invention;

FIG. 2 is an end view of the end B of the tile of FIG. 1;

FIG. 3 is a detailed fragmentary sectional view taken on line 3—3 of FIG. 1;

FIG. 4 is a fragmentary perspective sectional view taken on line 4—4 of FIG. 1 showing the lower side of the lower flange;

FIG. 5 is another perspective view also taken on line 4—4 but viewed from a different direction and showing the upper side of the uppermost flange;

FIG. 6 is a view similar to that of FIG. 4 showing a modified form of interconnecting lugs;

FIG. 7 is a view similar to that of FIG. 5 showing the modified form of interconnecting lugs of FIG. 6;

FIG. 8 is a vertical sectional view of a tile of modified form and the relationship of this tile to an adjacent tile about to be connected thereto; and

FIG. 9 is a plan view of an assemblage of tiles showing how tiles of different types can be assembled.

Referring to the drawings, the tile 1B, comprising a sheet-like body, is provided at each of its upper and lower ends with pairs of parallel flanges 1 and 1'. At the upper edge A the flanges project upwardly from the upper surface of the tile and are spaced apart to provide a gutter 6. Flange 1 is provided with a perpendicular flange 2 extending beyond the upper end of tile 1B.

At the lower end B of tile 1B the flanges 1 and 1' project from the opposite or bottom surface of the tile.

In assembling vertically adjacent tiles flange 1' at end B is nested, fitted or mortised in the groove or gutter 6 between flanges 1 and 1' at end A of the adjacent lower tile. Similarly, the flange 1' at end A of the adjacent lower tile is nested, fitted or mortised in the gutter 6 between flanges 1 and 1' at the end B of the upper adjacent tile. This is clearly indicated in FIG. 8 of the drawings. Any water falling on a roof so constructed will not penetrate the joints even when blown by the wind. Any water that may flow past one flange 1 of one tile will be trapped in the gutter 6 between the flanges of the adjacent tile.

The flanges 2 projecting beyond the ends A and B of the tile are themselves interrupted at one side a little before the lateral edge of the tile in a manner to provide in each case an overlapping projection 9. During installation of the roof, the projection 9 can easily overlap and rest on the laterally adjacent tile.

Projecting from the outer side of each flange 1 (end A) at the upper portion thereof are male tenons or lugs 3 each provided with a generally central hole 10. Also projecting from the opposite side of adjacent flange 1' (end A) adjacent tile 1B are pairs of lugs 4 forming female members or mortises to receive tenons or lugs 3 of an adjacent tile. Similar tenons 3 and pairs of lugs 4 are carried by flanges 1 and 1' at the end B of the tile as clearly shown in FIGS. 1 and 8. To enable tenons 3 to be received between the pairs of lugs 4 the flanges 2 are provided with slots or windows on each side of each tenon 3 so that lugs 4 may pass through said slots.

It will be noted that lugs 4 are also provided with generally central openings 10. The openings 10 are positioned to register when the tenons 3 are nested between the lugs 4 and to receive a peg or pin or an iron wire enabling the attachment of the so connected tiles to the frame of the roof. The tenons 3 and the lugs 4 may be disconnected to allow removal, replacement or reversal of a tile.

As illustrated in FIGS. 1, 2 and 9, each tile is corrugated to provide alternate waves, crests or corrugations 7 of semiconical form and flat valleys 8. The semiconical corrugations 7 and the flats 8 may have different widths so that by turning or reversing tiles roofs of different aspects may be obtained.

As shown in FIGS. 6 and 7, the tenons 3 may be of dovetail formation and the lugs 4 may be shaped to form V-shaped notches between the lugs of a pair to receive the dovetail tenons 3.

If desired, the tile may be provided with an offset or relief portion forming a false reinforcing rib 11 as shown in FIGS. 8 and 9. This offset 11 has the visual effect of reducing the length of the tile, i.e. of making one tile appear to be two connected tiles and improving the connection from the aesthetic point of view.

The ribs or grooves 11 form larmiers or drips where cornice shoulders force the rain water to flow in drops resembling tears in place of trickling on the facings. While one rib 11 is shown by way of example, more than one rib 11 may be formed in each tile.

FIG. 9 shows an assemblage of tiles of different styles or aspects to illustrate by way of example the various arrangements of tiles that may be embodied in a roof with the same format of tiles. One tile is represented by the square shown in broken lines.

The tiles of this invention are reversible. Further the tiles may be formed of plastic or other appropriate material even of light metal. The assembled tiles form a lighter roof which makes it possible to lighten the roof frame. Moreover, a roof of assembled tiles of the present invention prevents the penetration of rain and pro-

vides an isothermal covering completely resistant to most violent winds.

It should be understood that the invention is not limited to the embodiment herein described and shown in the annexed drawings by way of example, it may be modified as to form, materials and dimensions without departing from the scope of the present invention.

Having described my invention, I claim:

1. A roof comprising a plurality of tiles having lapped upper and lower terminal edges and having interfitting flange means, said flange means of each lapped edge of each tile comprising a pair of flanges extending lengthwise of the associated edge and defining a trough between them, said flanges on said upper terminal edge extending upwardly and said flanges on said lower terminal edge extending downwardly, the inner flange of each said pair of flanges having on its inner side a pair of first projections with a first gap between them, the outer flange of each said pair of flanges having on its outer side a second projection and a pair of second gaps through said outer flange disposed one on either side of said second projection, said second gaps being of a depth substantially less than the depth of the associated said trough, said gaps and projections being so disposed that in each pair of said lapped edges, each said second projection of one lapped edge extends into a first gap and each said pair of first projections extends into a said pair of second gaps.

2. A roof as claimed in claim 1, said projections having perforations therethrough in the direction of the length of said flange means, said perforations being so located that the perforations of interfitting said projections are in alignment with each other.

3. A roof as claimed in claim 1, said projections being flat.

4. A roof as claimed in claim 1, said projections being wedge shaped.

References Cited by the Examiner

UNITED STATES PATENTS

117,605	8/1871	Cook	50—241
438,321	10/1890	Lindemann	50—241
3,114,218	12/1963	Macquere	50—268 X

FOREIGN PATENTS

580,572	9/1946	Great Britain.
1,246,781	10/1960	France.
482,812	7/1953	Italy.

EARL J. WITMER, *Primary Examiner.*