E. BENNETT.

Roofing-Tiles.

No. 154,828. Patented Sept. 8, 1874.

Fig. 1.

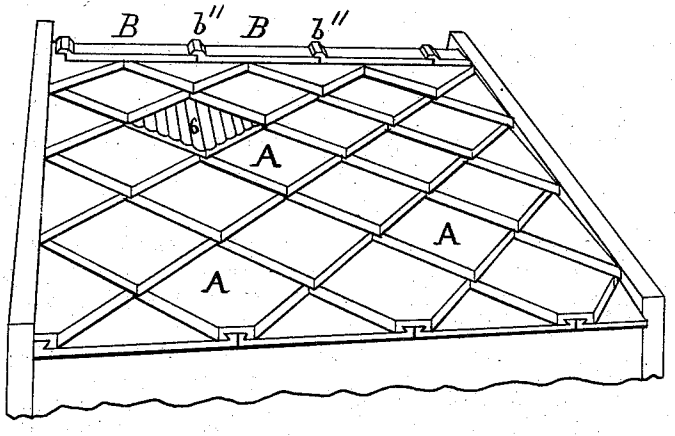


Fig. 2.

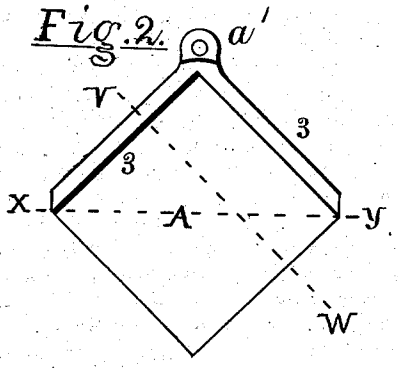


Fig. 4.

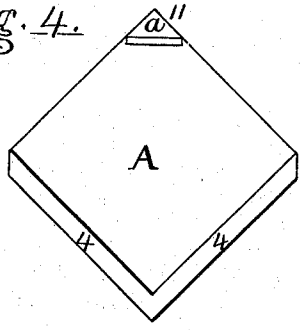
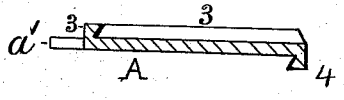


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWIN BENNETT, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN ROOFING-TILES.

Specification forming part of Letters Patent No. **154,828**, dated September 8, 1874; application filed March 11, 1874.

To all whom it may concern:

Be it known that I, EDWIN BENNETT, of Baltimore, in the county of Baltimore and State of Maryland, have invented an Improvement in Roofing-Tiles, of which the following is a specification:

The object of my invention is the production of a roofing-tile, which, when applied as will hereinafter be described, will be comparatively light in weight, easily constructed and applied, effectual in preventing the entrance of rain-water or snow through the connecting or overlapping joints of the applied tiles of a sloping roof, and not only fire-proof and durable in all sorts of weather, but costing less than a tin-plate roof, and not more than a first class shingle-roof.

I will now proceed to give a full, clear, and exact description of my invention, with reference to the accompanying drawings, in which—

Figure 1 represents a perspective view of a sloping roof covered with my improved tiles. Fig. 2 is a plan view of the upper side of one of the tiles, detached. Fig. 3 is a section of Fig. 2 cut on the dotted line *v w* of said figure. Fig. 4 is a plan view of the under side of the tile provided with a stay or toe under its upper angle, instead of the nail-eye shown in Fig. 2.

The flat tiles A are square, and each about eight inches, more or less, in length and width, and applied to a sloping roof with one of its angles upward, as shown in Fig. 1, and said angle having either a projecting eye, *a'*, (for receiving any suitable nail through it for securing the tile to the sheeting of the roof,) as shown in Figs. 2 and 3, or a downward-projecting toe, *a''*, which will catch over the horizontal laths used instead of sheeting, for the same purpose. Along on the two upper edges of the upper side of the flat tile A there are two raised portions, 3 3, joined together at the angle from which the eye *a'* projects, as shown in Fig. 2, or directly over or above the toe *a''* of Fig. 4. On the under side of the tile A there are two like projections, 4 4, along the two lower edges. The flat body of the tile A is about a quarter of an inch in thickness, and both the upper and the lower projections 3 3 and 4 4 are each about a quarter of an inch wide and a quarter of an inch thick, and slightly dovetailed or undercut along their respective inner sides, as shown in Fig. 3, as it better prevents the rain or snow from being blown through the joints of the overlapping tiles by high or violent blasts of wind in stormy weather. The whole tile A, with its eye *a'*, or toe *a''*, and projecting edges 3 3 and 4 4, are molded together in one piece, of fire-clay or of brick-clay, and afterward burnt or baked sufficiently hard to prevent the absorption of rain-water, and consequently frost-proof. The eye *a'* is not quite as high as the projections 3 3, and the object of making it, say, an eighth of an inch lower at its upper side than the upper sides of the projections 3 3 is, that the nail, by which the tile is to be secured from slipping out of place in applying it to the sheeting of the roof, may be freely driven low enough to be even with the top surfaces of the projections 3 3 without any danger of the hammer coming into direct contact with the upper side of said eye *a'*, and thus breaking the latter off. The upper sides of the tiles may be grooved in the direction of the pitch or slope of the roof to which they are intended to be applied, but the said grooves (indicated in tile 6, Fig. 1,) may be dispensed with as unnecessary.

In applying and securing the tiles to a sloping roof covered with sheeting-boards, as for slating, the lowest course is first laid, as represented in Fig. 1, and then the succeeding courses in regular order to the top or ridge of the roof; and, finally, if it be a double-pitch roof, the ridge or cap tiles B, laid along over abutting ends of the two top courses, as represented in said figure. As the first or bottom course commences from the straight horizontal bottom edge of the roof, the square tiles A are cut in half in the dotted line *x y* of Fig. 2, and the upper half only used for the purpose. These half-tiles are intended to be so constructed or molded beforehand. The tiles for the straight sides of the roof are either cut or previously molded to fit against the said straight sides or fire-walls, as may be found necessary. As the said courses are laid each tile is securely held in place by driving a suitable nail through the eye *a'*, (see Fig. 2,) into the sheeting below it, and so on in succession with each horizontal layer, the projections 4 4, on the under sides of the lower edges of the said tiles, fitting closely

and accurately up against the projections 3 3 on the upper sides of the tiles of the course previously laid.

If the square tiles A be made with the toe a^4, (see Fig. 4,) nails are not required to hold them in place upon a sloping roof, because in roofs having horizontal laths instead of board-sheeting, as in shingle-roofs, the said toe catches over the upper edge of the lath, and thus retains the tile in place. The joints between the ends of the rows of tiles and the fire-walls are to be cemented with mortar or otherwise secured against leaking, as in slate-roofs, and the ridge-tiles B are intended to be secured water-tight in the same manner.

Tiles constructed and applied as set forth and described will form a roof that will be both fire and water proof in all weather, comparatively light in weight, as durable as the stone or brick walls of the building which it may cover, and not costing more, nor even as much, as a first-class shingle-roof.

Having thus fully described my invention, and the best mode of applying the same, I wish it to be understood that I do not desire to claim the ridge-tile shown in Fig. 1, nor, broadly, a flat tile of rectangular form adapted to be laid with its "nail" or "nose" corner upward, as shown in Fig. 1; but

I claim as my invention—

A rectangular flat tile having the projecting edges 3 3 and 4 4 undercut or dovetailed at their respective inner sides, as represented in Fig. 3, for the purpose set forth and specified.

EDWIN BENNETT.

Witnesses:

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