D. SWAIN.

Tile-Roofings.

No. 142,056. Patented August 19, 1873.

FIG. 1.

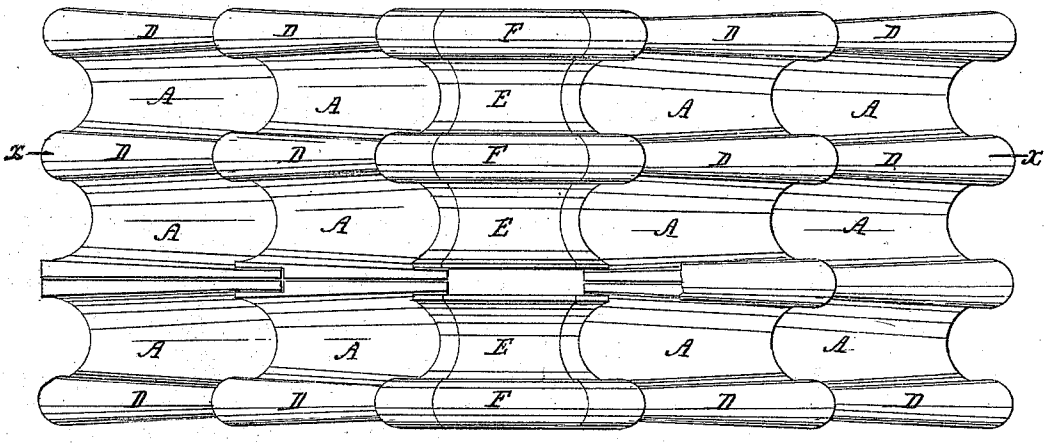


FIG. 2.

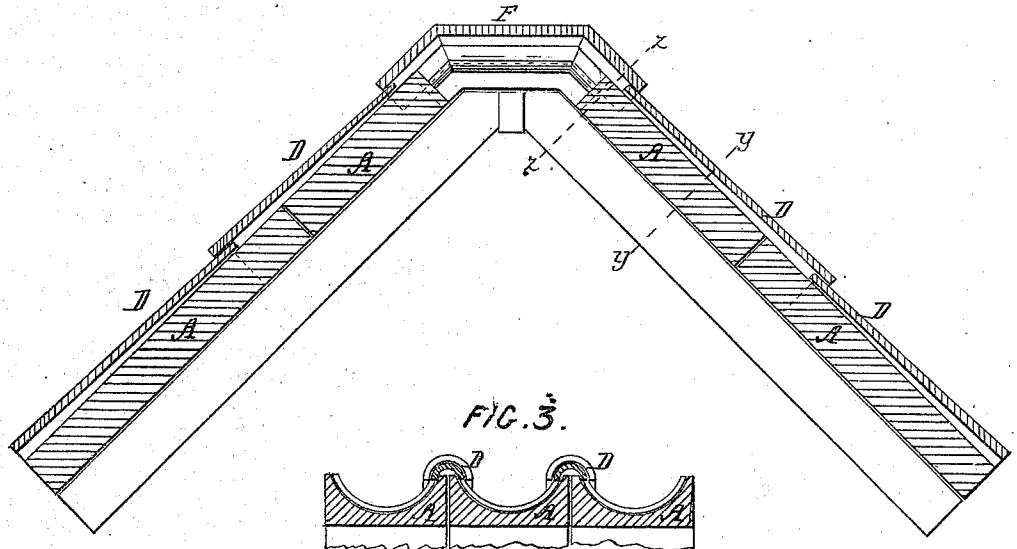
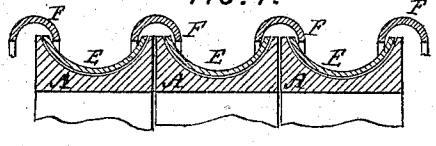


FIG. 3.

FIG. 4.



WITNESSES.

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DANIEL SWAIN, OF DOVER, NEW HAMPSHIRE.

IMPROVEMENT IN TILE ROOFINGS.

Specification forming part of Letters Patent No. **142,056**, dated August 19, 1873; application filed April 19, 1873.

To all whom it may concern:

Be it known that I, DANIEL SWAIN, of Dover, Strafford county, State of New Hampshire, have invented a certain new, useful, and Improved Construction of Tile Roofing; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying plate of drawings.

Under this invention a roofing material composed of molded cement and gravel or sand is employed; and the invention relates to the construction and application of such roofing material to roofs, in the form to be hereinafter in detail described.

In the accompanying plate of drawings my invention is illustrated, Figure 1 being a plan view; Fig. 2, a vertical section in plane of line *x x*, Fig. 1; Figs. 3 and 4, vertical sections, respectively, in planes of lines *y y* and *z z*, Fig. 1.

A A in the drawings represent a series of roofing-plates molded from cement and sand. These plates, under the present invention, are similarly shaped, and are flat upon the under side or face, and concave upon the upper, and at their ends they are adapted for one end of a plate to overlap the end of another plate. The plates, when laid, are placed with their flat sides upon the roof, extending lengthwise in the direction of the incline of the roof, and, when so laid, they are secured in place upon the roof by nailing, screwing, or otherwise, fastening each plate at such portion as is overlapped by another plate, the overlapping of the plates being arranged so as to shed water and prevent its running under the joint of the overlap, as shown in the drawings. In the location of the plates, end overlapping end, as before stated, they are thus laid in rows, one row alongside of another, and the lines of joints between two rows are covered by semi-conical tubes D of an inner and outer taper from end to end, which tubes set one into another at their ends, thus overlapping joints similarly to the overlapping of the roofing-plates A. These tubes may be molded into shape from cement and gravel or sand, or made of other material. At the ridge-pole of a gable roof, such as shown in the drawings, the ends of the roofing-plates upon each side of the ridge-pole are covered and protected by roofing-plates E, made of an angular form from end to end, but transversely concave, and at and along the contact-edges covered by tubes F, correspondingly angular from end to end.

By forming the plates A with flat bases and concave upper surfaces, a series of gutters or channels are produced, which carry off the water, and render the roof much less liable to leakage than the roofs which are constructed with flat upper surfaces.

I do not, broadly, claim a roofing-tile composed of cement and coarse grit, for such of itself is well known; but,

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a roofing, the plates A A, molded from sand and cement, and formed with flat bases and concave upper surfaces, as shown, in combination with the semicircular shields D, all applied substantially as herein described, for the purpose specified.

2. The angular roofing-plates E, with their angular covering-tubes F, substantially as described, for the purpose specified.

DANIEL SWAIN.

Witnesses:
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