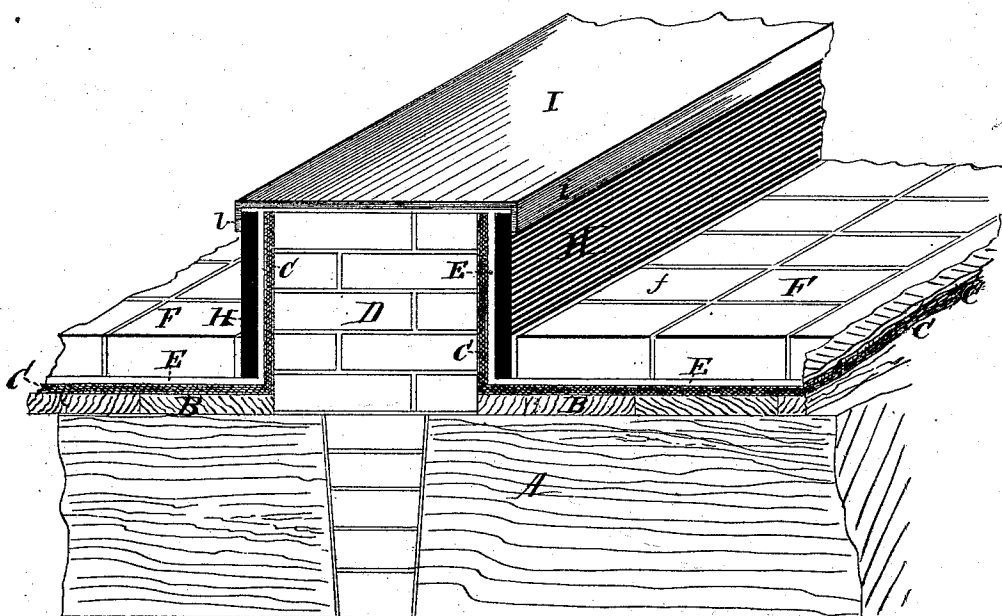


T. NEW.
Fire and Water-Proof Roofs.

No. 147,962.

Patented Feb. 24, 1874.



Witnesses:
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UNITED STATES PATENT OFFICE.

TOBIAS NEW, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE AND WATER PROOF ROOFS.

Specification forming part of Letters Patent No. **147,962**, dated February 24, 1874; application filed January 9, 1874.

To all whom it may concern:

Be it known that I, TOBIAS NEW, of the city, county, and State of New York, have invented a new and Improved Fire and Water Proof Roof; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which the figure is a section of the roof.

The invention relates to means whereby may be constructed a roof that is at the same time fire-proof, water-proof, and adapted to be used conveniently without injury as a foot-way. In cities the roof of the main or back building is frequently utilized for drying clothes, paint, or varnish, and other purposes, thus necessitating a frequent treading and trampling thereon. Most kinds of roofs become deteriorated under this use, develop leaks frequently, and require repairs at short intervals.

A represents the roof-beam, with the planks B laid in the ordinary manner, and the felt C laid on the latter and upward on each side of the battlement D, which is carried up about five courses of brick. This felt is laid preferably in five thicknesses, with intermediate layers of asphaltic cement or pitch, but with no cement next to the planking or battlement. The uncovered side of the felt then receives a heavy coat of asphaltic cement, the whole forming the water-repellent section of my improved roof, that effectually excludes dampness from the subjacent timbers. E represents a layer of hydraulic-cement mortar, which forms a partition between the superposed layer F of hard brick and the cement-covered felt C, between the several bricks *f*, between the cemented felt and the flashing H, that holds

the said felt against the wall, and between the upper part of battlement D and the coping I. The flashing H is made preferably of galvanized metal, and acts as a protection to the mortar E and cemented felt C against the elements, rendering unnecessary the usual flashing of oxidizable metal, while it is itself retained in position by the bricks *f* and the coping I, the latter being provided with lips *i*, that overlap and bind upon it. The cemented felt C is not stuck to the battlement D and planking B, because of the subsequent shrinkage in the wood, which would thus produce cracks or openings in the water-repellent.

By my mode of putting together the parts of roof, the planks B, cement mortar E, bricks *f*, and flashing H can all settle without opening or damaging the water-repellent C at any point. This compensating joint to allow for shrinkage of roof-timbers and the flashing render a roof not only fire-proof, water-proof, and convenient for the purpose, but both cheaper and more durable than similar roofs now in public use.

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

1. The combination, with the planking B, of the water-repellent C, laid not adhesively but loosely thereon, to prevent the fracture or opening of the water-repellent, as set forth.

2. The flashing H, set in the cement mortar E, to hold the water repellent C against the battlement D, as specified.

3. The combination, with the flashing H, of the coping I, having the lips *i*, as and for the purpose described.

Witnesses:

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