

H. G. FISKE.
Tank-Roofs.

No. 152,096.

Patented June 16, 1874.

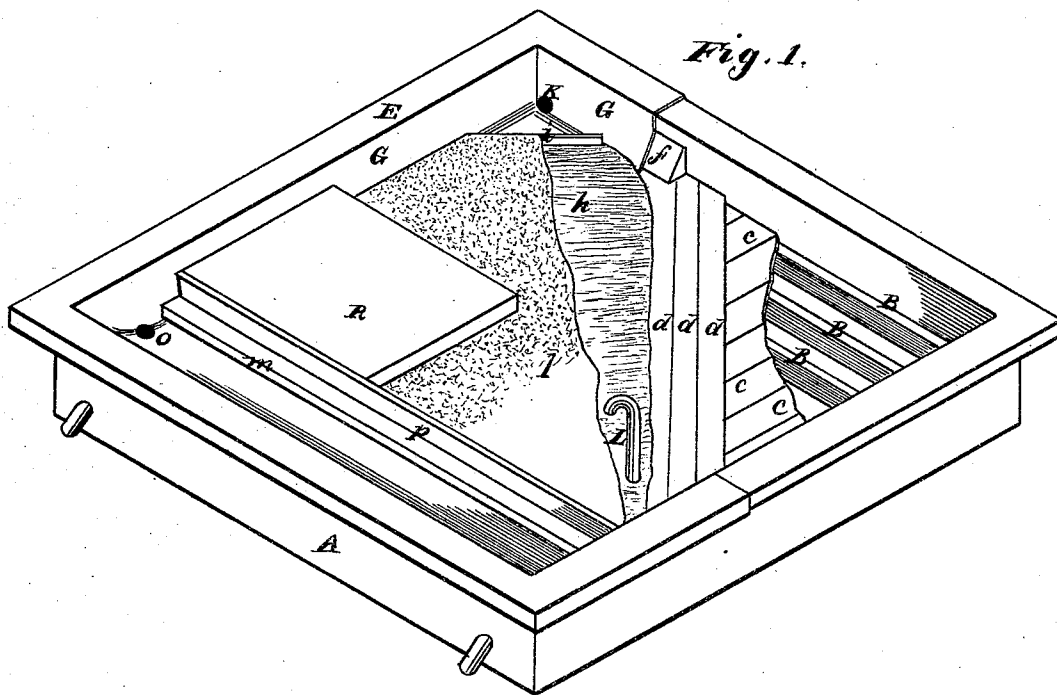
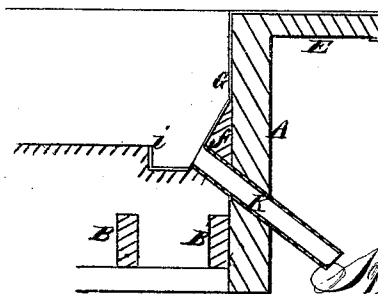


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY G. FISKE, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN TANK-ROOFS.

Specification forming part of Letters Patent No. **152,096**, dated June 16, 1874; application filed April 27, 1874.

To all whom it may concern:

Be it known that I, HENRY G. FISKE, of San Francisco city and county, State of California, have invented an Improved Roof for Buildings; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

The object of my invention is to provide a flat roof for buildings which will not only be water-tight, but also fire-proof, and which can, if desired, be converted into a garden or pond of water.

Referring to the accompanying drawings for a more complete description, Figure 1 is a perspective view of my roof. Fig. 2 is a section in elevation.

Let A represent the top of a building of any kind. The roof-supporting timbers or joist B B I secure horizontally in the manner of laying floor joists or timber, so that a perfectly flat roof can be constructed upon them. I then lay a flooring of thin boards, *c c*, transversely across the roof-joists, so as to cover the entire roof, and upon this I place a second thickness of boards, *d d*, diagonal to the first course *c c*, thus forming a double thickness of boards laid diagonal to each other and securely fastened. The coping E extends upward above the roof to any desired height, but usually about one foot. In the angle formed by the upper course *d* of boards and the inner wall of the coping I secure a triangular wooden strip, *f*, so that its base fits down upon the upper course, while its side slopes or inclines from the wall to the course, thus providing a fastening-strip for the ends of the boards, and protecting the joint next to the coping. I then take a strip, *G*, of sheet metal, (tin or copper,) and tack one of its edges to the upper course *d*, near the foot of the triangular strips *f*. This sheet metal I then fit to the inner wall top and outer edge of the coping, so as to provide a complete metallic covering for the coping. Across one corner of the roof I place a metallic dam, *i*, so as to provide a triangular recess. I then carry a pipe, *K*, through the wall at the angle in the bottom of this recess.

I also extend a dam, *m*, entirely across one end of the roof, a short distance from the foot of the triangular strip *f*, and through the corner of the roof at one end of the channel or gutter thus formed I lead a pipe, *o*. The roof or upper course *d* of boards I then cover with any desired thickness of asphaltum, *h*, or equivalent plastic water-repellent compound, taking care to cover the edge of the metallic strip *G*, the dams *i m* preventing the asphaltum from entering the corner recess and end channel. The roof being perfectly level, the asphaltum covering will be equally thick at every point, and in case it should become heated by the sun it cannot run off, but will remain in its place. To protect the asphaltum from the heat of the sun, I cover it with a layer, *l*, of sand. The metallic dams *i m* are several inches higher than the asphaltum covering, so as to serve as a curb to prevent the sand from getting into the corner recess and end channel. A few inches from the dam *m*, and parallel with it, I secure a strip, *p*, of wood or other material, which extends entirely across the roof above the layer of sand, and inside of this strip I fill in a layer of earth, *R*, to the height of the strip. *L* is a pipe, which connects below with one of the water-pipes which permeate the house. This pipe passes up through the roof, and serves as a means of supplying water to the roof. This earth roof can be converted into a garden by planting trees, shrubs, and flowers in the top soil. The water will be retained in the sandy layer by the dams *i m*, and any surplus will percolate under the strip *p* and pass into the channel at the end of the roof, from which it will pass through the pipe *o* to the outside gutter. The covering of sand, soil, and water will thoroughly exclude the sun and air from the asphaltum covering, and preserve it from waste by softening and evaporating.

This roof can be constructed cheaper than a pitched roof, as the beams or rafters are placed directly and horizontally upon the ceiling-joists. It is also more substantial, and is less liable to crack or move, as every part is arranged so as to avoid displacement.

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

A flat roof composed of the joists B, diagonal cross-courses of boards *c* and *d*, triangular binding-strip *f*, and metallic binding or cover G, applied to the coping E in the manner described, in combination with the layer *h* of asphaltum, and covering-layers of earth, substantially as above described.

In witness whereof I hereunto set my hand and seal.

HENRY GUSTAVUS FISKE. [L. S.]

Witnesses:

GEO. H. STRONG,
JNO. L. BOONE.