

(No Model.)

M. TURLEY.

ROOF.

No. 350,512.

Patented Oct. 12, 1886.

FIG. 1.

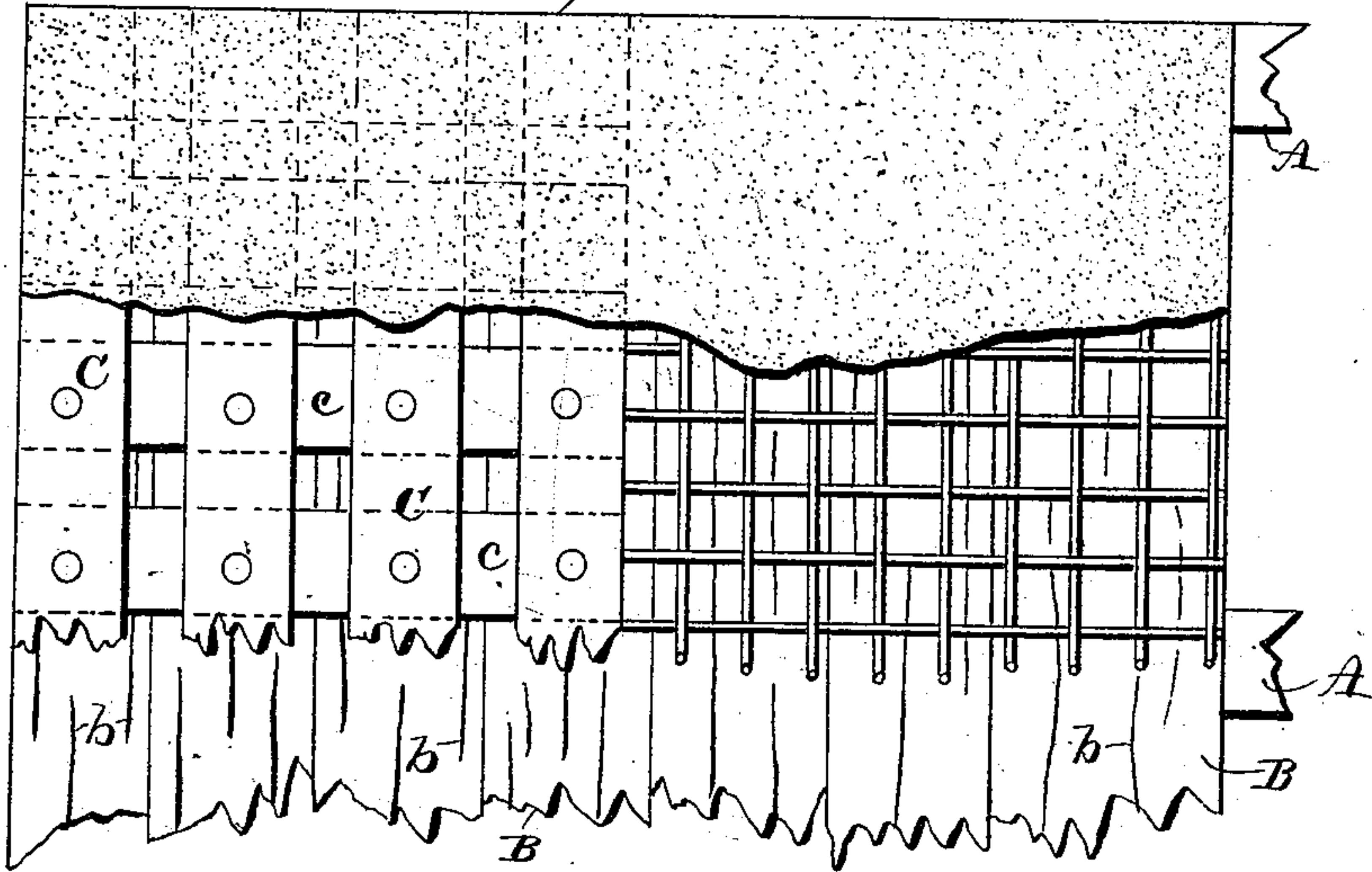
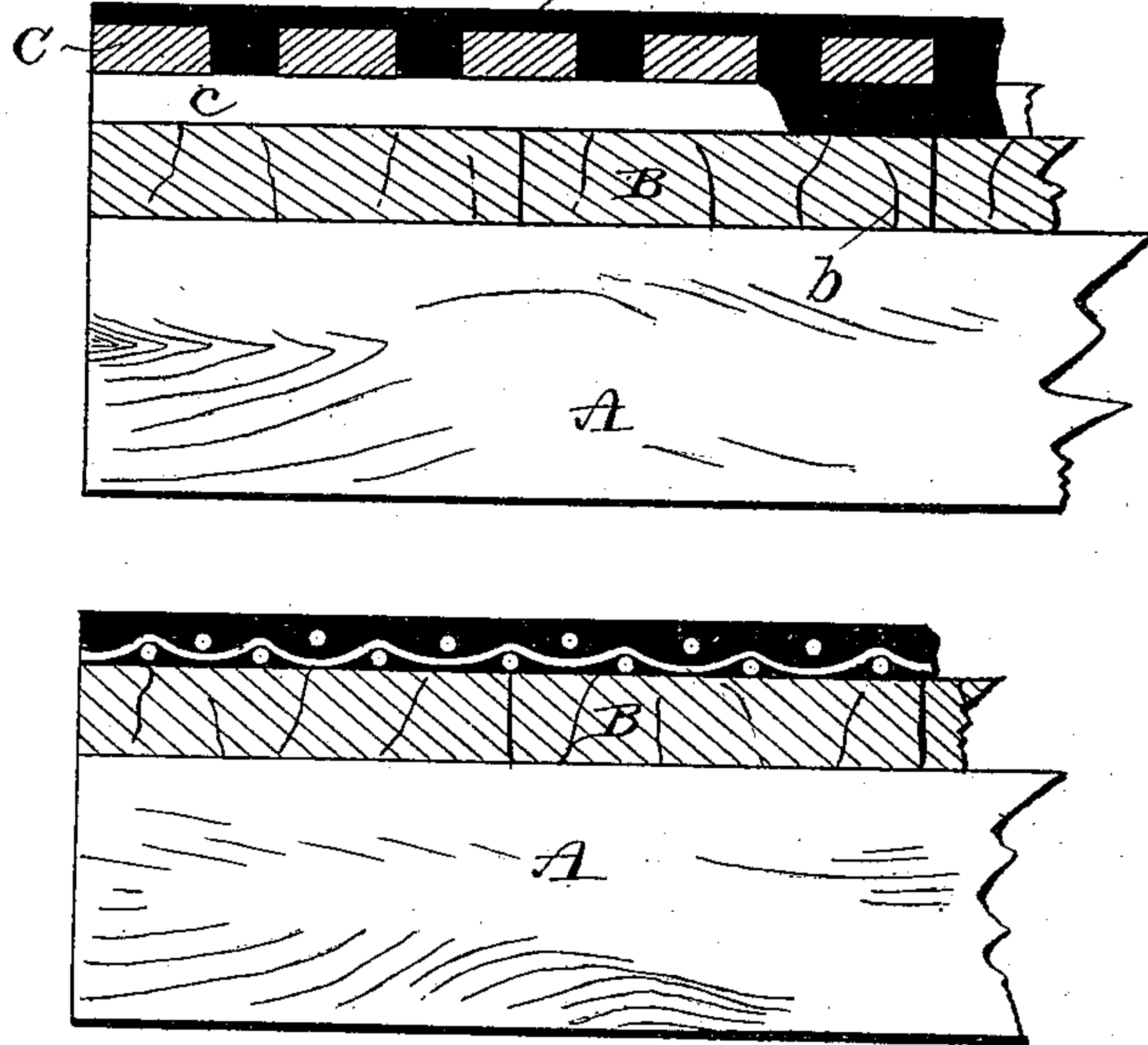


FIG. 2.



WITNESSES

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## ROOF.

SPECIFICATION forming part of Letters Patent No. 350,512, dated October 12, 1886.

Application filed December 22, 1885. Serial No. 186,446. (No model.)

*To all whom it may concern:*

Be it known that I, MARSHALL TURLEY, of Council Bluffs, in the county of Pottawattamie and State of Iowa, have invented certain new and useful Improvements in Roofs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 My invention relates to an improvement in roofs.

The object is to provide a roof in which the cement, pitch, or other plastic material used as an outer coating will not be liable to become cracked by the shrinkage of the roof-boards, and in which the plastic covering shall be securely held in position by a checked base.

With these ends in view, my invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a portion of a roof, showing two forms of checked groundwork, the cement being partially removed; and Fig. 2 is a vertical section through each of the groundwork-sections.

A represents a series of rafters, as usual, in an ordinary roof. The roof-boards B, which are secured to the rafters, are partially split to form numerous cracks, *b*, which may extend the whole length of the board, or may be short, the end of one lapping past the end of its adjacent crack. The object is to provide the boards with a sufficient number of splits or cracks to allow it to shrink without forming cracks or openings in the plastic covering. To the outside of the roof-boarding is secured a layer of open-work material, either woven wire or wooden lattice formed by applying a series of thin strips, C, across an under series of similar strips, *c*. The groundwork thus formed is filled and covered smoothly with water-proof plastic material, either cement, pitch, coal-tar, asphaltum, or other suitable material. The open-work admits of the cement falling into the meshes and being thereby firmly clinched in position, while the strips *c*, which are firmly nailed to the roof-boards, transversely thereto, tend to

prevent the roof-boards from shrinking to any great extent in any one place, and this advantage is more surely gained by the splitting of the roof-boards, as stated. The distribution of the shrinkage of the boards obviates an objectionable feature which has hitherto been encountered—viz., the tendency which an extensive shrinkage of the boards in any one place has had to open cracks in the plastic covering.

The roof thus constructed is very durable, and can be constructed at a low cost. It forms not only a water-tight roof, but is also air-tight, and prevents the transmission of both heat and cold. When the wire meshes are employed, their expansion or contraction by the shrinkage of the wood will not be sufficient to crack the plastic material, and the meshes will prevent the wood from cracking it.

It is evident that the open-work layer might be formed in other shapes than those shown, and that the roof-boards might be formed of very narrow strips, instead of being split, and that other slight changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the construction herein set forth; but,

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

1. In a roof, the combination, with the roof-boards and an intermediate open-work layer rigidly secured to the roof-boards, one series of strips of the open-work layer being arranged transversely to the roof-boards, of a covering or layer of plastic material adapted to fill the meshes of the open-work layer and form a smooth outside surface.

2. In a roof, the combination, with the roof-boards provided with manifold cracks, splits, or joints of an intermediate open-work layer, one series of strips forming the open-work layer being secured to the roof-boards transversely to the cracks, splits, or joints, substantially as set forth.

3. In a roof, the combination, with the roof-boards and the flat strips rigidly secured thereto in the positions shown, of a covering

or layer of plastic material adapted to fill the spaces between the strips and form a smooth outside surface.

4. In a roof, roof-boards provided with numerous splits or cracks, for the purpose substantially as set forth.

In testimony whereof I have signed this speci-

fication in the presence of two subscribing witnesses.

MARSHALL TURLEY.

Witnesses:

FRANK M. HUNTER,  
DAVID TOSTEVIN.