

No. 756,756.

PATENTED APR. 5, 1904.

O. J. WILDER & H. VANDERVEEN.

ROOF FOR BUILDINGS.

APPLICATION FILED AUG. 24, 1903.

NO MODEL.

Fig. 1.

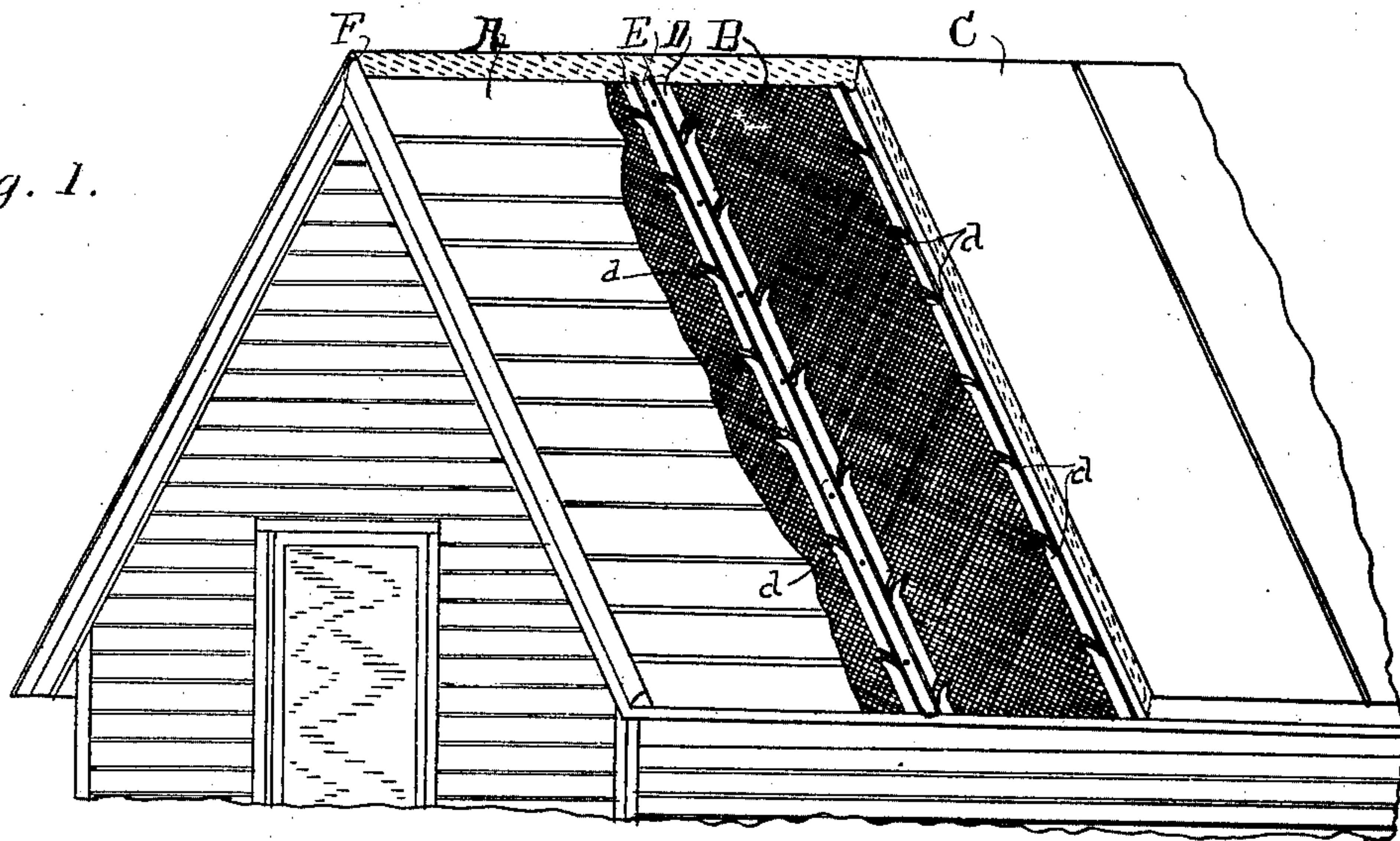
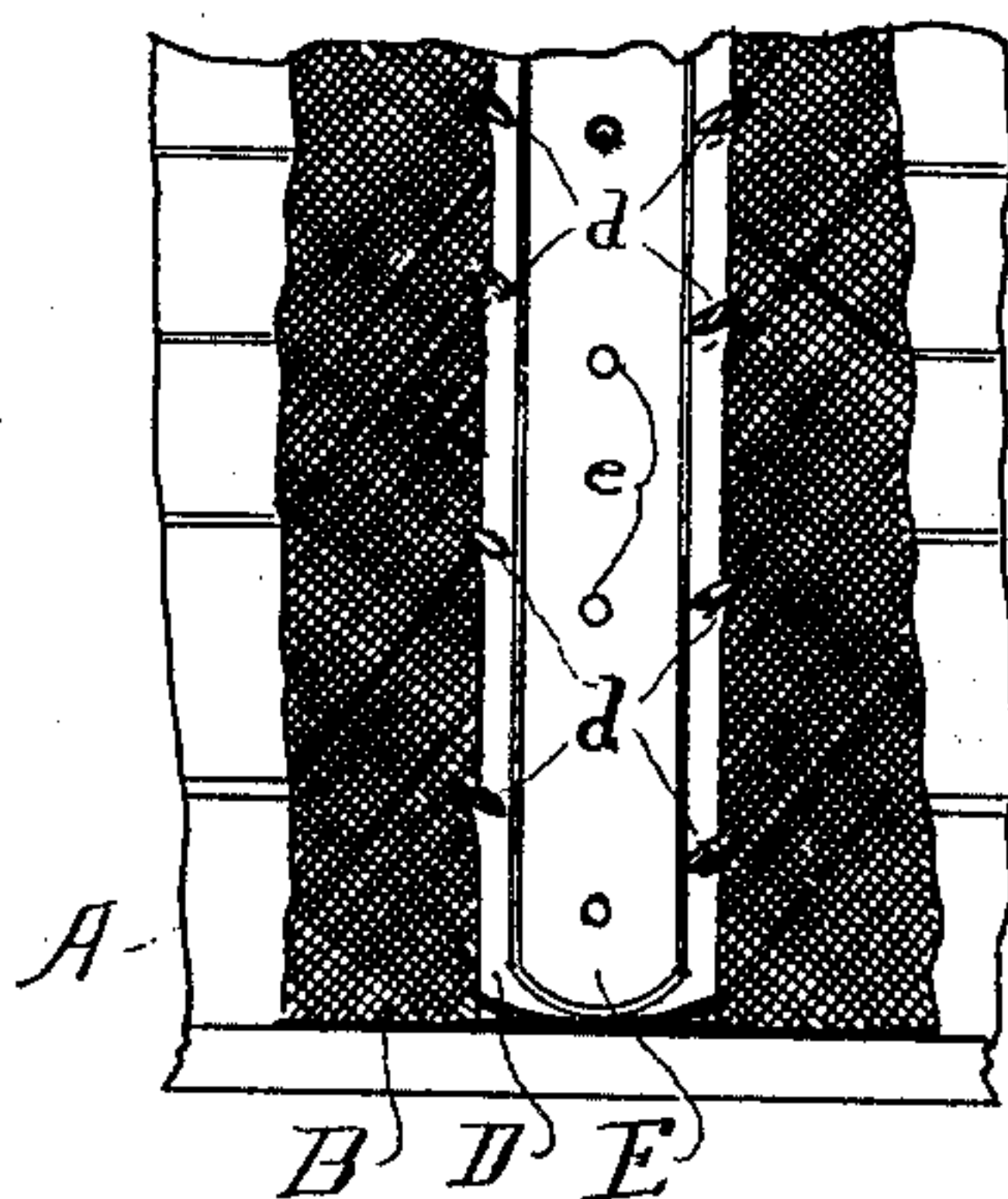


Fig. 2.



Witnesses

A. Allgier.
J. A. Hodges

By

Inventors

Orlin J. Wilder.

Henry Vanderveen

Isabel J. Willey

Attorney

UNITED STATES PATENT OFFICE.

ORLIN J. WILDER AND HENRY VANDERVEEN, OF GRAND RAPIDS,
MICHIGAN.

ROOF FOR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 756,756, dated April 5, 1904.

Application filed August 24, 1903. Serial No. 170,661. (No model.)

To all whom it may concern:

Be it known that we, ORLIN J. WILDER and HENRY VANDERVEEN, citizens of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Roofs for Buildings, of which the following is a specification.

Our invention relates to improvements in concrete or plastic roofs; and its objects are, first, to avert the danger of the escaping water from plastic concrete just laid dripping through the cracks between the roof-boards; second, to avert the danger of the soft concrete sliding or "crawling" down the roof before it becomes fully set; third, to provide a means whereby the concrete will become solidly cemented to the roof-boards, and, fourth, to provide against the danger of leak by reason of the concrete cracking or splitting open along the line of division or contact between the several blocks as laid. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective of the gable and roof of a house. Fig. 2 is a section of a roof, showing the manner of applying the gutter-strips at the line of connection between blocks. Similar letters refer to similar parts throughout both views.

The principal difficulty met in attempting to cover roof-boards, especially upon very steep roofs, lies in the inability to make the soft concrete mortar adhere to and keep its place upon the boards in consequence of the fact that in curing or drying the water in the mortar settles to the bottom and forms a very thin, soft, and slippery slime of water with just enough of the concrete and sand floating in it to render it impossible for it to adhere to the wood, and as a consequence the soft mortar will slide on the boards and the water will drip through the cracks between the boards, which is at least a great annoyance and in many instances works great damage to articles beneath. We have found that these difficulties may be almost wholly averted by placing a sheet of fabric B upon the boards

A, and for the purpose we prefer the use of a soft-threaded, loosely-woven burlaps or gunny-bag fabric. With this fabric we find that while the threads take up and carry off the water after the manner of a wick carrying oil and conducts it almost clear of the mortar to the eaves of the roof without allowing a particle to escape through the cracks between the roof-boards it at the same time takes up and holds the concrete in contact with the boards until it becomes thoroughly set and forms a cement that adheres solidly to and becomes almost an integral part with the boards.

After having properly placed the burlaps upon the roof and secured it, by tacking or otherwise we spread the concrete C upon it in much the same manner that the same would be plastered upon a wall, and to facilitate the spreading of the mortar and at the same time provide a better means of carrying off any water that might percolate through a crack or seam that might be formed between the blocks of concrete necessary in the construction of the roof and to provide a further fastening means for the concrete we place a metallic strip D, provided with outwardly-curved points *d*, that will engage the soft mortar and form a solid support when the mortar is dry, and over this we place a metallic trough or gutter E, curved up at the edges sufficiently so that the mortar may pass between it and the strip D, and secure both these strips by nails *e*, driven through them and into the roof-boards A, acting at the same time as a support and securing means for the burlaps B.

When spreading the concrete mortar, we make the center of the gutter E the dividing-line between the several blocks of concrete as they are spread upon the roof and in this way place the gutters E immediately under the only place where a crack can occur in the concrete after it has dried and insure a safe conduct of any water that may pass through such crack to the edge of the roof and off, so that there will be no danger of the roof leaking by reason thereof.

F represents a cornice that may be placed

at the ends of the roof to cover the ends of the concrete portion, and, first, protect the edges of the concrete from being broken off; second, render it much easier to form this portion of the roof, and, third, render the end much more sightly than would be possible with a raw concrete edge.

The use of the metallic strips D and E upon a roof without the burlaps spread beneath them would not be a departure from our invention; but we greatly prefer the use of the burlaps, as and for the purposes set forth, and the prongs projecting from the metallic strips D when these strips are used without the strips E may be struck from any portion of the surface of the strips, as well as from the edges, the mechanical action being the same in either case, though we prefer the edges, as the placing of the prongs in the body of the strips would destroy them for use as gutters to carry off water in case a crack should occur between the blocks of concrete immediately over the strips. These metallic strips or the burlap sheets may be used successfully with any plastic roofing and are particularly desirable and necessary in the construction of concrete roofs.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination with the roof-boards of

a building, burlaps spread immediately upon the boards and secured thereto, and a mortar of concrete, sand, and water spread immediately thereon, substantially as and for the purpose set forth. 35

2. In combination with the roof-boards of a building, sheet fabric spread over the boards, metallic strips placed over the fabric crosswise of the roof-boards, prongs curved from said strips, a narrower strip placed over this strip and curved leaving a space between its edges and this strip and all secured to the roof-boards, and concrete mortar spread over all, substantially as and for the purpose set forth. 45

3. In combination with the roof-boards of a building, metallic strips placed crosswise of the boards, prongs curved from the edges of said strips, curved strips placed longitudinally over said strips leaving an opening between the edges of the curved strips and the pronged strips and secured to the roof-boards, and concrete mortar spread over all, substantially as and for the purpose set forth. 50

Signed at Grand Rapids, Michigan, August 20, 1903. 55

ORLIN J. WILDER.
HENRY VANDERVEEN.

In presence of—

ITHIEL J. CILLEY,
J. A. HODGES.