J. H. HOOD.

Roofing.

No. 136,516. Patented March 4, 1873.

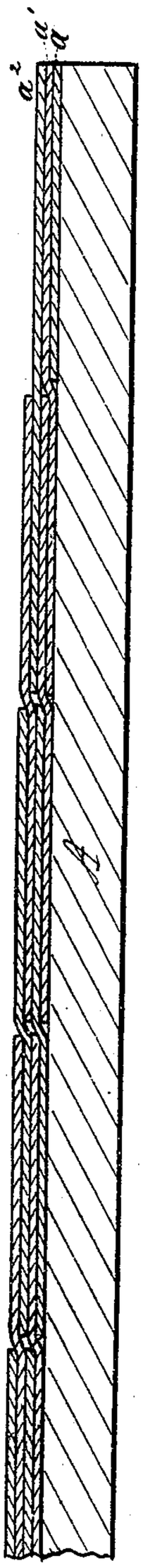

Fig. 1.

Fig. 2.

Witnesses.

Archie Baine
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Inventor:
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per R. F. Osgood,
atty.

UNITED STATES PATENT OFFICE.

JOHN H. HOOD, OF DANSVILLE, NEW YORK.

IMPROVEMENT IN ROOFING.

Specification forming part of Letters Patent No. **136,516**, dated March 4, 1873.

To all whom it may concern:

Be it known that I, JOHN H. HOOD, of Dansville, in the county of Livingston and State of New York, have invented a certain Improvement in Roofing, of which the following is a specification:

My invention consists of a roofing made up of successive layers of felt overlapping and breaking joints with each other, as hereinafter described, and built up in successive coverings, which are laid in cement at the time of application, and the joints of the felt covered by wooden or equivalent strips, as hereinafter more fully set forth.

In the drawing, Figure 1 is a cross-section of a roof showing my improvement; Fig. 2, a similar view showing a modification.

I employ in this roofing the ordinary layers of felt, but not previously covered with cement, as is usually done. These layers I apply to the roof, either up and down or crosswise, as follows: The sheets come in rolls of a given width. I split or divide the first length of felt in the middle, longitudinally, so as to make a long narrow strip, *a*. I then apply the cement in its heated and melted state, on a sufficient width of the roof A, and lay the strip *a* in it. When this is done I cover the strip *a*, already laid, and the adjoining boarding of the roof, with more of the cement, and lay over it a strip, a^1, of the felt of full width, which thus covers the half strip already laid, and laps on the boarding. I then cover this whole strip and sufficient of the adjoining boarding with cement again, and lay the next whole strip in the same manner, except only overlapping a part of the previously-laid strip and leaving its other part bare, but with a covering of soft cement. The last-laid strip is then fully covered with cement, as before, and a new one laid, overlapping it, and the successive whole strips are thus laid till the roof is fully covered. When fully complete, it will be seen that the felt is cemented fast to the boarding of the roof, and the overlapping edges of the strips are also cemented together; and furthermore the upper surface of the felt is continuously covered with soft cement.

I then commence and lay a second covering on top the first, cementing both inside and out as I go along. There is this difference, however: instead of first using a half strip of the felt at the edge I use a whole one, a^2, which is wide enough to "break joints" with the first strip of the primary covering. The succeeding strips of the second covering will then break joints with those of the primary covering over the whole extent of the roof. In this manner of alternating the half and whole strips at the edge of the roof any desired number of coverings may be applied, and the roofing may be made of any desired thickness, with all the layers alternating or breaking joints.

A roofing thus laid is very effectual, as the layers are cemented to the boarding of the roof itself, and also solidly embedded in cement from bottom to top. The covering thus forms an integral part of the roof itself.

When the roofing is finished the joints of the felt strips may be covered by strips *c c* of board, running in the same direction. These strips are made a few inches in width, and their edges are beveled off, as shown. They are nailed in place and covered with cement so as to be water-proof. They serve as battens, covering the joints, and serve to throw the water into channels on each side of the joints, so as to run down over the unbroken portions of the felting.

The roofing may be painted and sanded or covered with rock-crystal, which, when hardened, forms a glazed and granular surface that will resist the elements almost indefinitely, and will also purify the water in passing over. The strips *c* of board may be painted any desired color to give contrast to the roofing.

If desired, also, slate, tin, shingles, or iron may be embedded in the cement to form a part of the roofing.

Layers of felt are in common use for roofing. They are usually previously prepared and covered with the cement, which is thus hard at the time of laying. These strips are tacked down upon the roof and spread over the top with cement. In such cases it is difficult to make the roof tight, as the nail-heads draw through, and wind gets beneath the layers. The roofing is loose and flabby. I obviate these difficulties by cementing to the boarding, and by building up in a solid body of cement, and without the use of nails.

It will be noticed that a double layer of cement is embodied between the successive cov-

ering—first, that which is left on top in laying the first covering; and, second, that which is placed over it in laying the second covering. The wooden strips *c* covering the joints of the layers also serve an important purpose, as they throw the water from the joints and give it a direction in channels over the center or closed portions of the strips of felt. The eaves-troughs may be formed by nailing strips to the boarding and covering them with cement.

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

The combination of a roofing made up of two or more coverings of felt embedded in cement, as described, and a series of wooden or equivalent strips, *c*, covering the joints of the felt, as and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN H. HOOD.

Witnesses:
JAMES FAULKNER, Jr.,
JNO. C. WILLIAMS, Jr.