Oct. 16, 1923. 1,470,837

W. J. HOFSTATTER

COMPOSITION SHINGLE

Filed April 27, 1922

FIG. 3.

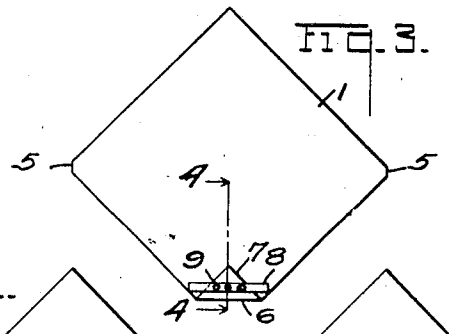


FIG. 4.

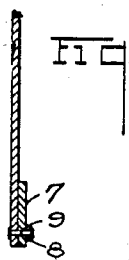
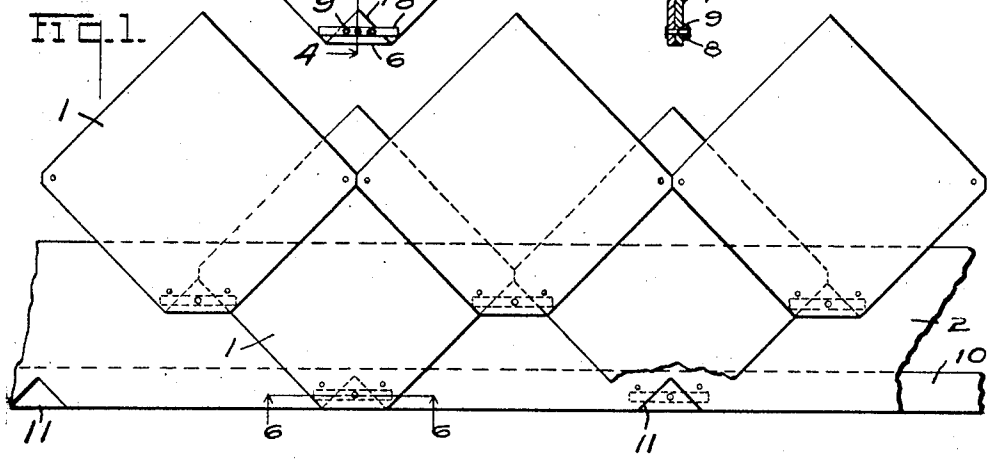


FIG. 1.



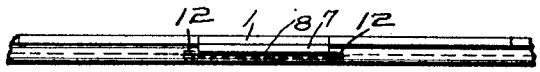


FIG. 5.



FIG. 6.

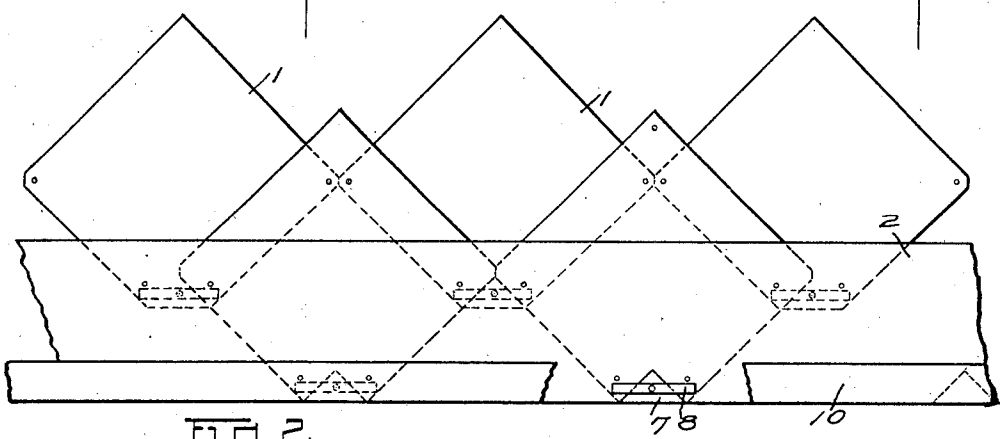


FIG. 2.

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UNITED STATES PATENT OFFICE.

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COMPOSITION SHINGLE.

Application filed April 27, 1922. Serial No. 556,825.

To all whom it may concern:

Be it known that I, WILLIAM J. HOFSTATTER, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have made an invention appertaining to a Composition Shingle; 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, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention has for its object to provide a composition roofing comprising an edge or bordering starter and shingles that are so combined and arranged that the exposed corners or edges of the bordering row of shingles will adhere to the starter and the exposed portions of the other shingles of the roofing will be secured to adjoining shingles and the exposed portions will lie flat or their under surfaces in their entirety will be flush with the outer surfaces of the adjoining portions of the adjoining shingles. The invention also has for its object to provide in a "diamond" roofing shingle a means whereby "alternate" shingles that meet at their points may be readily and rapidly placed in position. The invention has for its object other features and advantages that will appear on examination of the drawings forming a part hereof and from the following description.

The invention may be contained in composition roofings composed of shingles of different shapes and having parts of the starter variously arranged. To illustrate a practical application of the invention I have selected one of such roofing constructions as an example of roofings containing my invention and shall describe it hereinafter. The roofing selected for purposes of illustration is shown in the accompanying drawings.

Figure 1 of the drawings illustrates a top part of the roofing. Fig. 2 illustrates the underside of the roofing. Fig. 3 illustrates a composition shingle. Fig. 4 illustrates a section taken on the line 4—4 indicated in Fig. 3. Fig. 5 is an edge view of the starter and a part of a shingle. Fig. 6 is a sectional view taken on the line 6—6 indicated in Fig. 1.

1 in the figures is the shingle, which may partake of any suitable shape, following, however, the general scheme, wherein the side edges of the shingles lie at an angle to the edge of the roof, as shown in the drawings. In this "diamond" arrangement the "alternate" shingles meet at their points and overlap portions of the juxtaposed lower row along edges disposed diagonally to the edge of the roof.

The starter 2 is first laid along the edge of the roof to cover the roof where the shingles would otherwise by reason of their arrangement permit exposure of the roof.

The shingles of the form shown in the drawing and selected for purposes of illustration are substantially square in form and the corners 5 are removed so that in placing they may be easily aligned and positioned by merely causing the edges formed by removing the corners to abut one against the other. By this means the shingles may be readily placed in position. The width of the lap between the adjoining rows of shingles will be regulated to a certain extent according to the size of the portion that is removed from the corners, that is, if the line of the centers of the shingles are at a given distance apart the width of the lap between adjoining rows of shingles will depend upon the amount that is removed from the corners. The edges formed by the removal of the corners will moreover extend at right angles to the edge of the roofing and in line with the points of the lower shingles, and by reason of the fact that each row of shingles can be laid by merely abutting the said edges in the laying of the shingles a means is afforded whereby the shingles may be rapidly and easily laid.

Each shingle is also cut along the line 6 to remove the lowermost corner. A filler 7 having a size substantially the same as the size of the portion removed by the cut along the line 6 is secured to the back of the shingle. The filler, in the arrangement of the shingles shown, is triangular in form and has a surface area substantially the same as that removed by the cut 6. Moreover, its point is in line with the center and upper point of the shingle. The filler 7 may be the portion that is removed by the cut 6.

The insert or filler 7 is secured in position in any suitable manner. However, in order that the exposed portion of each shin-

gle may lie flat to the roof, that is, so that the under surface of the exposed portion may lie flush to the adjoining surfaces of adjoining shingles, the filler or insert is secured by a strip extending transversely to a line extending through the center of the shingle. The strip 8 is preferably a sheet metal strip of sufficient rigidity and is secured to the shingle by means of one or more rivets, such as the rivets 9 that extend through the shingle 4, the insert or filler 7 and the strip 8. The insert and the strip are thus secured in position at the under side of the shingle 4. The length of the strip 8 is such as to extend beyond the edges of the insert 7 so that when the shingles are placed in position the ends of the strips 8 will extend under and engage portions of adjoining shingles of the next succeeding lower row and the filler 7 will fit into the corners formed between the said adjoining shingles. Thus the under surface of the exposed portion of each shingle will be held tightly against the underlapping portions of the said adjoining shingles and the edge formed by the cut along the line 6 will lie flat, in the plane of the body portion of the shingle, and the filler 7 will lie between the edges of the said adjoining shingles and fill the space between the under side of the shingle and that portion of the shingle or of the starter that lies beneath the shingle and between the said adjoining shingles.

The starter is formed of a strip that extends along the edge of the roof and is provided with a turned portion 10 that lies under the body portion of the starter. The starter is provided with a plurality of openings 11 located in the body portion of the starter and arranged in spaced relation, according to the width of the shingle, along the folded edge of the starter. When the form of the shingle shown in the drawing is used the openings are triangular in form. The turned edge portion 10 has a width sufficient to cover the openings in the body portion of the starter.

The size and the shape of the openings are the same as that of the filler 7 of the shingles and in order to secure the exposed portion of the lower row of shingles to the starter, short cuts 12 are made at the fold between the portion 10 and the body portion of the starter and at the corners of the triangular openings 11, and are of a length sufficient to permit the strips 8 to pass between the folded portion 10 and the body portion of the starter. When, therefore, the starter has been secured in position along the edge of the roof, the shingles of the lowermost row are slid across the starter, the strips 8 being moved through the cuts 12 and the fillers 7 entering and filling the openings 11. Thus the lowermost row of shingles is secured to the body portion of the starter by reason of the engagement of the strips with adjoining portions of the starter located beneath each shingle of the lowermost row. Thus the under surfaces of the exposed portions of the lower row of shingles is held in contact with the upper surface of the starter and the portion of each of the lower row of shingles along the edge formed by the cut 6 is held down by the strip 8 in the same manner that this portion of each shingle is held down where the shingles are placed in juxtaposition with other shingles, as heretofore described.

By my invention I have thus provided an exceedingly tight roof, leaving no places where water may lodge and freeze and where all spaces and openings are filled and all parts are secured together.

The same general arrangement may also be used in connection with metal shingles and starter or with shingles formed of any material.

I claim:

1. In a roofing, a plurality of shingles having inserts nonintegral with the body portion of each shingle, and having a thickness substantially the same as that of the shingle, and a shape substantially the same as that formed between edges of adjoining shingles of the next succeeding lower row of shingles and the lowermost edge of the shingle to which the insert is attached, means for securing the insert to the body of the shingle and a strip secured to the underside of the insert and to the lower portion of the shingle and extending laterally beyond the edges of the insert to hold the shingle in position relative to the adjoining shingles.

2. In a roofing, a plurality of shingles, each shingle having an insert nonintegral with the body portion of the shingle and secured to the underside of the shingle, and having a thickness substantially the same as that of the shingle, and a flat metal strip extending transversely to a line extending through the centers of the insert and of the shingle and having end portions extending beyond the insert for engaging parts of the roofing, and a rivet extending through the strip, the insert and the body of the shingle for securing them together.

In testimony whereof I have hereunto subscribed my name to this specification.

WILLIAM J. HOFSTATTER.