(No Model.)

L. D. CORTRIGHT.

ROOFING FOR BUILDINGS.

No. 313,853. Patented Mar. 17, 1885.

Fig. 1.

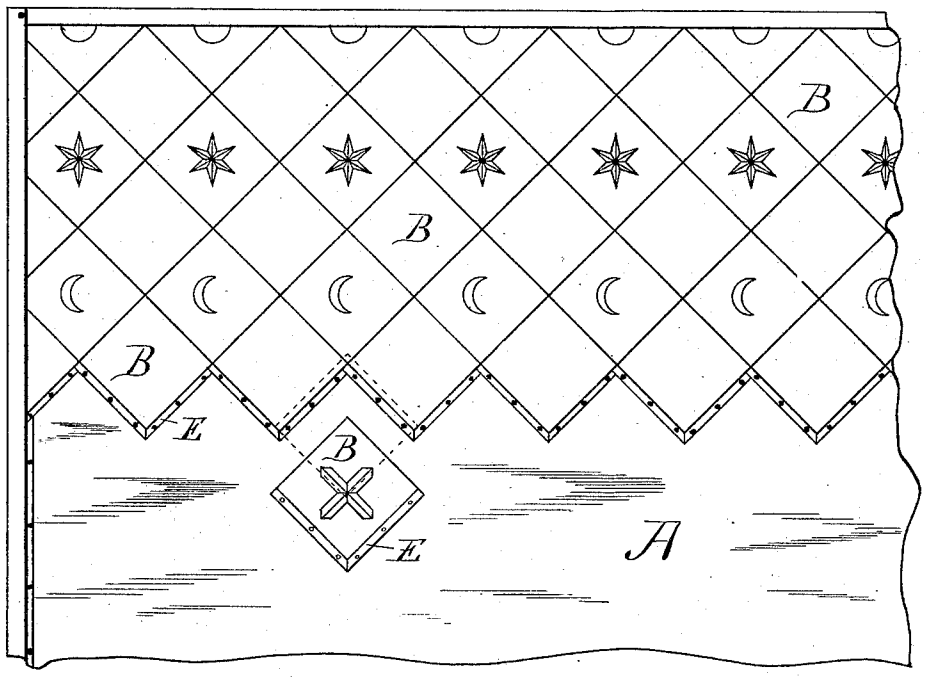


Fig 3.

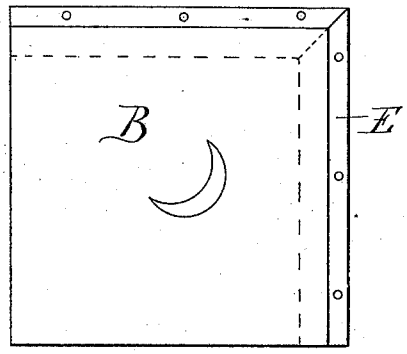


Fig 2.

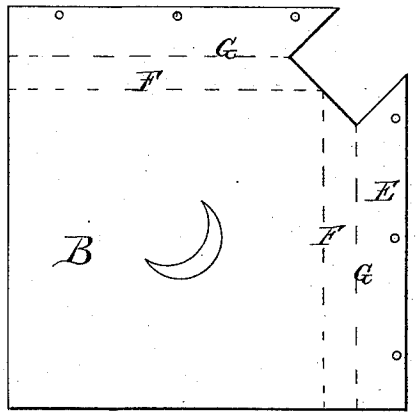
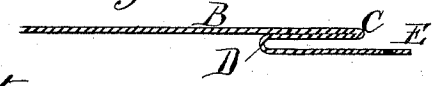


Fig. 4.



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UNITED STATES PATENT OFFICE.

LEWIS D. CORTRIGHT, OF HYDE PARK, ILLINOIS.

ROOFING FOR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 313,853, dated March 17, 1885.

Application filed September 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, LEWIS D. CORTRIGHT, a resident of the village of Hyde Park, Illinois, and a citizen of the United States, have invented a new and useful Improvement in Roofing for Buildings, of which the following is a specification.

My invention relates more particularly to metallic roofing plates or shingles; and, speaking generally, it has for its object the construction of roofing in sections so made that the roof may be laid from the comb downward and all the plates or shingles securely interlocked with each other, as hereinafter described.

In the drawings, Figure 1 shows a plan view of a portion of a roof with my improved shingles in position and one ready to be slid into place. Fig. 2 shows one of the shingles cut out in blank preparatory to bending to form the joints for connecting them together. Fig. 3 shows the shingle ready for use, and Fig. 4 shows a vertical sectional view of the joint or connection by which the parts are united.

A represents the boards on which the roofing is placed; B, my improved shingles; C, a bend or turn in the metal of which they are composed; D, a second bend or turn in the same; E, the extension or flange by which the shingles are nailed or fastened to the roof, and F and G in Fig. 2 the dotted lines on which the bends in making the joints C and D are made.

In making my improved shingles I take a piece of tin or other suitable sheet metal and cut it into square, diamond, or other shaped pieces, as may be desired, and of the requisite size. A very convenient size I have found to be about twelve inches square, though the invention is applicable to shingles of different sizes as well. I cut these shingles out by machinery in blank, and at the same stroke cut out a pentangular piece from one of the corners, as shown in Fig. 3. I then bend back and inwardly the two sides of the square or other shaped blank, which extend from the corner from which the pentangular piece has been cut, until they lie back flat upon or against the metal composing the body of the shingle. This bend begins at the center of the inner side of the space left by cutting out the pentangular piece above mentioned, and its location is designated by the dotted line F in Fig. 2. I then again bend the sides back and outwardly until they lie back flat and almost upon or against the metal first bent inwardly, leaving just space enough to permit the insertion between the folds of the edges of other shingles in the process of laying the roof. The location of this bend is shown in dotted line G in Fig. 2. The bends are so located and the width of the folds so proportioned as to permit the metal to extend out beyond the first fold to form a flange for nailing to the roof-boards, as shown in Figs. 3 and 4. The completed shingle then appears as shown in Fig. 3, and is ready to be placed in position on the roof.

The shingles for the top course, as represented in the drawings, are made precisely as above described, except that they consist of only half-shingles cut into the shape of a triangle, to permit the forming of a straight edge when laid as hereinafter described, and the shingles along the edge of the roof at either end of the building are also similarly cut off to make a straight edge. These forms are both shown in Fig. 1, and require no further detailed description.

In laying a roof with my improved shingles, I first put the ridge or comb in place, though this is not essential. I then place the first row of shingles with the folds underneath along the comb, slipping the broad side of the triangle well up under the ridge, if it has been put in place, so that the corners out of which the pentangular piece has been cut and to which the folded sides approach extend downward. The upper corners of the shingles composing the first row lie contiguous to each other, and a triangular space with its apex at the top is left between them. They are now secured in place by nailing through the extended flanges. I then take the full-sized shingles, as shown in Fig. 3, and insert them into the spaces left between the shingles of the first row. In doing this the shingle is placed with the corner out of which the pentangular piece was cut, and to which the folded sides approach, downward, as in placing the first row. The detached shingle shown in Fig. 1 illustrates the position of the shingle just before its insertion. It is now pushed up and its sides enter the folds of the shingles at either side a suffi-

cient distance to secure a firm and water-tight connection. When properly in position, it is secured by nailing through the flanges into the roof-boards. The third and subsequent rows of shingles are laid in the same manner and until the roof is finished.

I have described the roofing above when laid to present the appearance of diamond or lozenge shapes; but it is obvious that it may be laid in squares with facility and advantage, though I prefer to lay it as described, and so have represented that method in the drawings, and described it in detail.

If the connection between the shingles at the joints does not appear sufficiently close to exclude all water which might beat or be blown back up underneath the folds, the joints may be struck close together with a mallet or secured with solder as the work of laying the roof proceeds. In the case of flat roofs solder should be used to close the joints securely; but with inclined roofs the natural and ordinary connection formed by the joints will generally, if not always, be found sufficient.

The different rows of shingles may be provided with figures stamped on them in the act of cutting and folding them, or such figures may be painted on, and all the effects of mosaics or roofs composed of alternating plates of different-colored slates obtained.

Some of the advantages of my improved plate or shingle are that it is adapted to be laid from the apex or comb of the roof downward to the eaves, thus avoiding injury by the scaffolding material or other matter on the finished roof, and preventing accumulations of dirt &c., under the roofing material while being laid. In the case of steeples, spires, and other steep-pitched roofs, the scaffolding is attached only to the unfinished portion of the roof and is removed as the work progresses downward. All delays in laying the roof while the eaves, cornices, and gutters are being put in place is avoided, as the two works can progress simultaneously, the plates or shingles being attached to the roof-boards by nailing through the extended flange. All contraction and expansion caused by the heat and cold are permitted through the bends or folds in the metal, and the various plates or shingles are capable of being connected or attached to each other by means of the laps or folds formed along two of their edges, into which the edges of other plates or shingles are inserted and retained, so that over the whole surface of the roof all the plates are interlocked and interwoven securely together. These advantages are very material, as every practical roofer will readily perceive.

What I claim as new, and desire to secure by Letters Patent, is—

1. A metallic roofing-plate or shingle-blank having a pentangular piece cut from one of its corners and the side approaching such corner thereby pointed, whereby the sides of the space may be folded to each other in the completed shingle, substantially as described.

2. A metallic roofing plate or shingle having two of its sides approaching one of its corners bent or folded inwardly and then outwardly to a point, and two of its sides approaching the diagonally-opposite corner straight or unfolded, whereby in laying the roof the straight or unfolded edges may be inserted in the bent or folded edges of its fellows, substantially as described.

3. A metallic roofing plate or shingle having two of its contiguous sides or edges bent or folded inwardly and then outwardly to a point, both the folds being on the under side of the shingle, and two of its contiguous sides or edges straight or unfolded, whereby in laying the roof the bent or folded edges will overlap and cover the straight or unfolded edges of adjoining shingles, substantially as described.

4. A roof for buildings consisting of a series of metallic plates, each provided with laps or folds, as described, on its two sides or edges extending from a point at the lowest corner, and with straight or unfolded edges on its two sides extending from the highest corner, whereby the upper and unfolded edges are inserted into the bends or laps in the lower and folded edges of the plates forming the next upper series, substantially as described.

5. A roof for buildings consisting of a series of metallic plates, each provided with laps or folds, as described, on two of its sides or edges adjacent to each other, and with straight or unfolded edges on two of its sides, also adjacent to each other, the corresponding folded edges of the several plates lying in lines parallel to each other, whereby the said unfolded edges are inserted into the bends or laps in the folded edges of its fellows, substantially as described.

6. A roof for buildings consisting of a series of interlocking or interlapping plates in which the first row of plates is laid at the comb or apex of the building and each successive row farther down, substantially as described, and for the purpose set forth.

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