(No Model.)

A. A. CUSHMAN.

METAL ROOFING.

No. 385,408. Patented July 3, 1888.

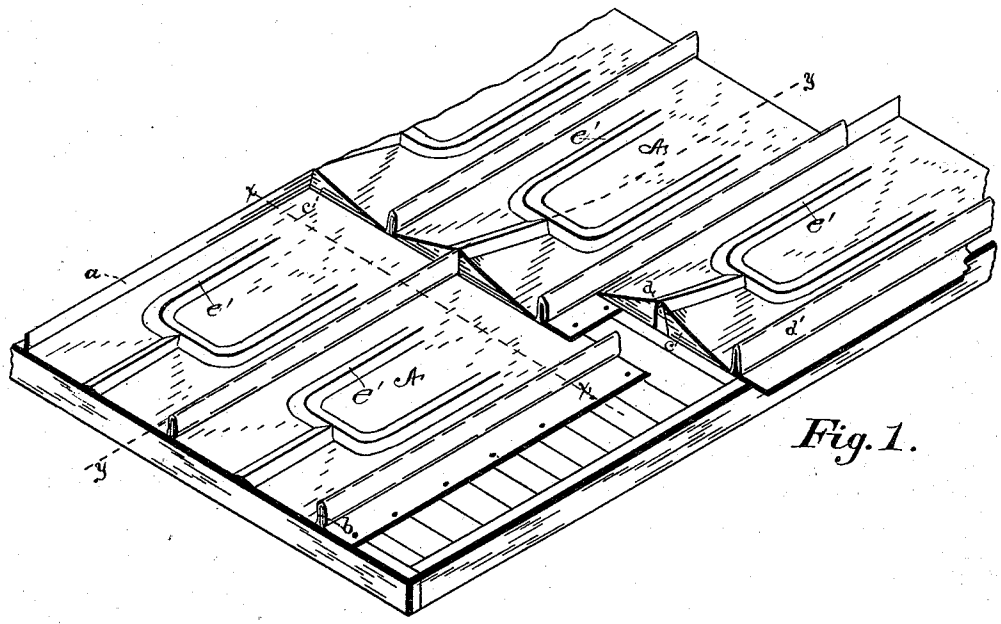


Fig. 1.

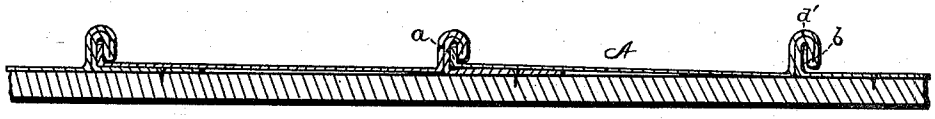


Fig. 2.

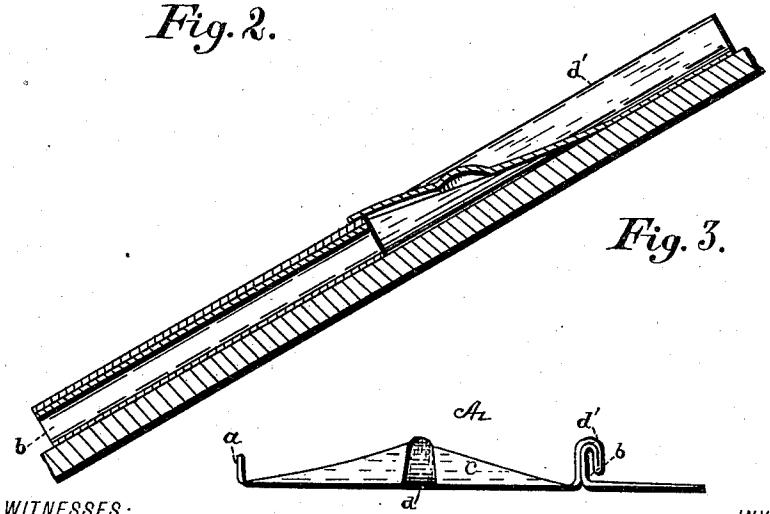


Fig. 3.

Fig. 4.

WITNESSES:

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METAL ROOFING.

SPECIFICATION forming part of Letters Patent No. 385,408, dated July 3, 1888.

Application filed March 24, 1888. Serial No. 268,319. (No model.)

To all whom it may concern:

Be it known that I, AMOS A. CUSHMAN, a citizen of the United States, residing at Shreve, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Metal Roofing; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon, in which—

Figure 1 is a view of a portion of the roof, showing one of the shingles placed in position to be slipped into proper position. Fig. 2 is a sectional view through line *x x*, Fig. 1. Fig. 3 is a sectional view through line *y y*, Fig. 1. Fig. 4 is a bottom end view of one of the shingles.

The present invention has relation to metal roofing; and it consists in the different parts and combination of parts, hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the shingles of which the roof proper is composed, and may be of any convenient and desired size, and when placed on the roof are arranged as illustrated in Fig. 1. One edge of each shingle A is provided with the bent or tongued-up portion *a*, which is located at the extreme edge of the shingle, as illustrated in the drawings. The opposite side of the shingle A is provided with the groove *b*, which is substantially of the form shown in the drawings, and is formed by bending the body of the shingle A. The groove *b*, together with its extension, is located a short distance from the edge of the shingle proper, the distance from the edge to the groove *b* being of sufficient width to give or furnish a good and sufficient lap, and at the same time provide a nailing or attaching surface. The groove *b* is for the purpose of receiving and holding the bent or tongued-up portion *a*, thereby firmly holding the shingle A in proper position, and at the same time securely locking the shingles together.

The bottom or lower ends of the shingles A are provided with the bent portions *c*, which are substantiallly of the form shown in the drawings, and are so adjusted that the bottom or lower edges will closely fit the top or upper faces of the upper ends of the shingles A. These bent portions *c* are formed by bending a portion of the bottom or lower end of the shingle A at right angles to the shingle A, or, if desired, said bent portions may be bent to any angle, it being understood that these portions *c* are bent down.

The notch *d* is located as illustrated in Figs. 1 and 4, and is for the purpose of receiving the ridge *d'*, as illustrated in Fig. 1.

The tongued-up portion *a* and the groove *b* are so adjusted that when the shingle proper is placed in proper position they will press or hug the lower end of the shingle to the shingles directly below it, thereby forming a close and water-tight joint.

The lower portions of the shingles A are ridged, the pitch extending from the center to each side, and are so formed for the purpose of elevating the lower portions of the shingles A, and at the same time providing a means of covering the ridge *d'*, and also shunting the water to the sides of the shingles. If desired, ridges *e'* may be pressed in the shingles A. In placing the shingles in position after the first shingle has been properly secured to the roof they are slipped in endwise.

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

1. The shingle A, provided with the bent or tongued-up portion *a*, the groove *b*, the ridge *d'*, the bent portion *c*, and the notch *d*, substantially as and for the purpose specified.

2. The shingle A, provided with the ridge *d'* and pitched from the center to each side upon its lower portion, the bent portions *c*, and the notch *d*, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

AMOS A. CUSHMAN.

In presence of—
L. C. WISE,
F. W. BOND.