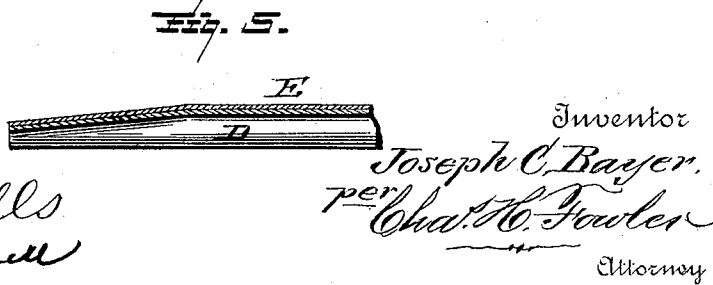
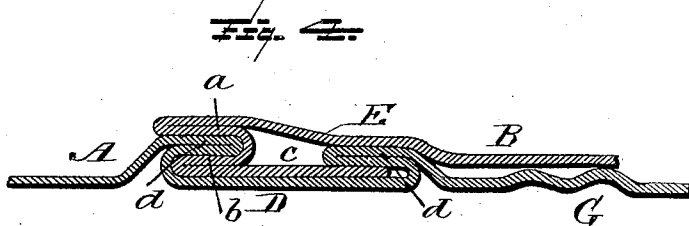
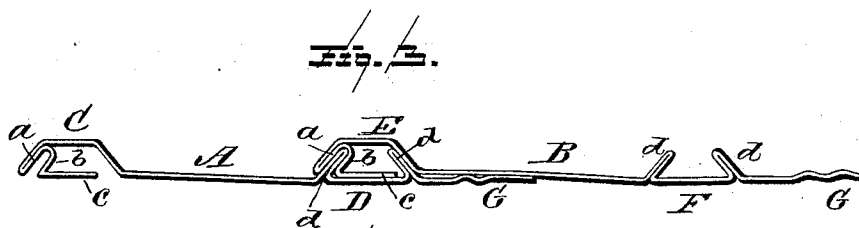
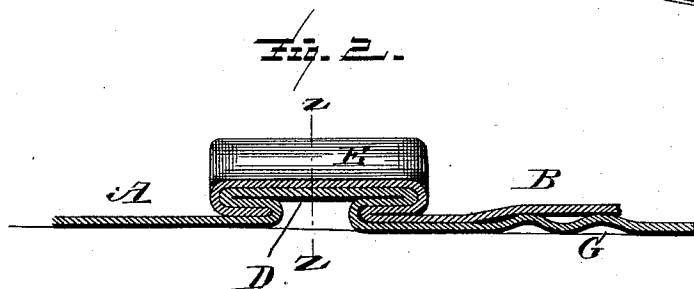
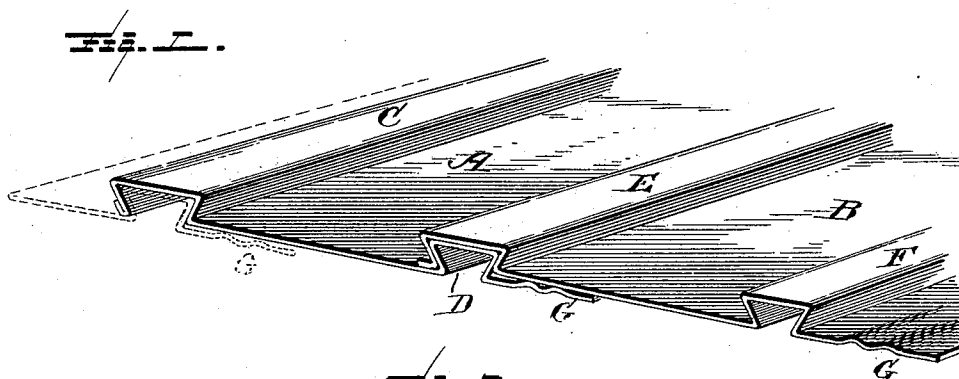


(No Model.)

J. C. BAYER.
SHEET METAL ROOFING.

No. 451,550.

Patented May 5, 1891.



Witnesses
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UNITED STATES PATENT OFFICE

JOSEPH C. BAYER, OF PORTLAND, OREGON.

SHEET-METAL ROOFING.

SPECIFICATION forming part of Letters Patent No. 451,550, dated May 5, 1891.

Application filed November 8, 1890. Serial No. 370,750. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. BAYER, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Sheet-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 of reference marked thereon.

Figure 1 of the drawings represents a perspective view of two metal shingles or roofing-sheets constructed in accordance with my invention and connected together; Fig. 2, a detail sectional view of the construction shown in Fig. 1, showing the joint compressed and finished after the two shingles or roofing-plates are connected together. Fig. 3 represents a modification of the joint; Fig. 4, a sectional view of said joint after being compressed; Fig. 5, a detail sectional view taken on line *z z* of Fig. 2.

The present invention has for its object to improve the construction of metal roofing shingles or plates or other metal roof-covering, whereby a perfect weather-proof lock or joint is obtained and the metal shingle or roofing plate is both strong and durable and the joints formed without the use of solder, thereby providing a roofing that will withstand the driving storms of snow, wind, or rain. These several objects I attain by the construction substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A B represent the two metal shingles or roofing-plates, constructed in accordance with my invention and connected together, as shown. Each of these shingles or roofing plates or sheets is constructed alike, and I have simply shown two of them as being all that would be required to illustrate the manner of connecting them together. The shingle or plate A is formed with what I term "caps" C D, the former being somewhat larger than the latter mentioned cap, and extend the length or width of the shingle or roofing-plate. The shingle or roofing-plate B is similar in construction to that above described, the shingle or plate

having the caps E and F, the former being in like manner made larger than the latter.

In connecting the metal shingles or roofing-plates together the cap E of shingle or plate B is slipped over the cap D of shingle or plate A at the end of the cap and slipped along until the two plates or shingles are in line, as shown in Fig. 1. After this is accomplished and the shingles or plates connected together, as above described, by hammering or by other suitable means the joint thus formed by the caps interlocking each other is compressed, as shown in Figs. 2 and 5, the latter figure showing the compressed incline on the end of the roofing plates or shingles. This forms a perfect and secure seal at the extremities of the caps, which will effectually prevent moisture from entering into the joint between the caps.

In order to insure sufficient elasticity of the metal shingles or roofing sheets or plates to enable the joint when compressed to be uniform, the shingles or plates are corrugated, as shown at G, such corrugated portion joining the smaller one of the caps, as shown. This will allow the lower or smaller one of the caps to yield sufficiently, so that when the two are compressed together a perfect and uniform joint will be the result, said corrugation also strengthening the shingle or plate.

In Figs. 3 and 4 I have shown a modification of the joint shown and described in Figs. 1 and 2, the caps of the metal shingles or roofing-plates being connected together and the joint formed by compression, as hereinbefore described.

In the construction shown in Figs. 3 and 4 the larger ones of the caps have inward bend *a*, the end of the sheet or plate being bent upward and inwardly against the side of the cap to strengthen it, thence bent around and in a downward direction, as shown at *b*, and thence in a horizontal direction across the cap, as shown at *c*. The smaller ones of the caps are bent to form tongues *d*, which also form the sides of the caps, and when the two caps of the adjoining shingles or plates engage with each other the tongues *d* will fit into the space between the bends *a b* of the respective caps, and when the caps are compressed the joint will be of the form shown in

Fig. 4, possessing increased strength and durability. The extremities of the caps when connected together, as hereinbefore described, are compressed lengthwise on an incline, as shown in Fig. 5, in order to produce a sealed joint at the sides of the roofing and admit of the water running off by the inclination of said compression.

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

1. Metal roofing shingles or plates having interlocking caps which are compressed lengthwise on an incline to form, respectively, a sealed joint and means for shedding the water, substantially as and for the purpose set forth.

2. Metal roofing shingles or plates having interlocking caps, the lower one of said caps

having a corrugated extension and the caps compressed lengthwise to present an incline, substantially as and for the purpose described.

3. In sheet-metal roofing, the shingles or roofing-plates formed with caps of unequal sizes, the smaller ones of said caps bent to form tongues of double thickness of metal, which tongues form the sides of the cap, and the metal forming the larger ones of said caps bent upward and against the side thereof and thence in a direction downward and horizontally, as shown and described.

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

JOSEPH C. BAYER.

Witnesses:

C. M. IDLEMAN,

J. C. RUTENIC.