(No Model.)

A. A. SPAHMER, Jr.

METALLIC ROOFING TILE.

No. 503,173. Patented Aug. 15, 1893.

Fig. 1.

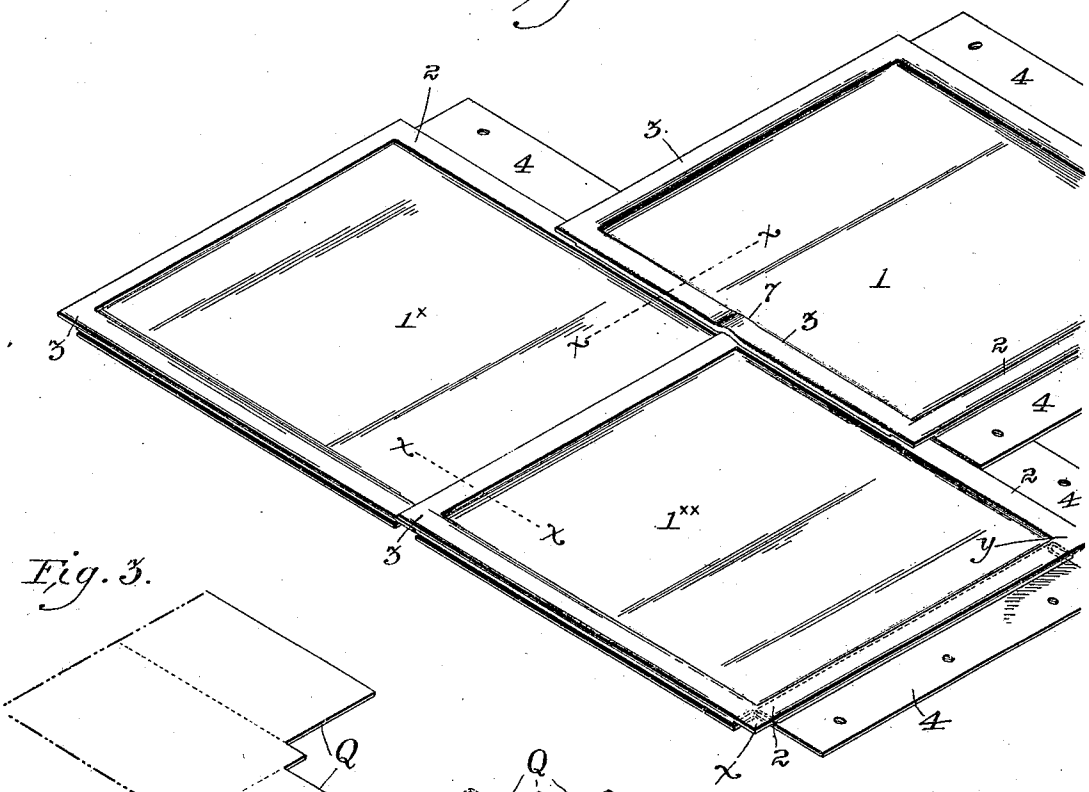


Fig. 3.

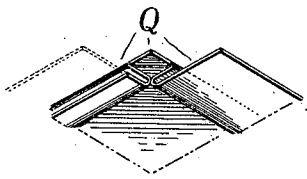
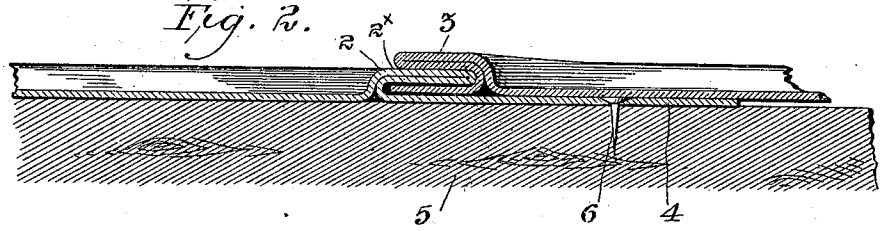


Fig. 4.

Fig. 2.



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ADAM A. SPAHMER, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, OF ONE-HALF TO FRANK SKINNER AND ALBERT GIESECKE, OF SAME PLACE.

METALLIC ROOFING-TILE.

SPECIFICATION forming part of Letters Patent No. 503,173, dated August 15, 1893.

Application filed July 11, 1892. Serial No. 439,736. (No model.)

To all whom it may concern:

Be it known that I, ADAM A. SPAHMER, Jr., of Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Metallic Roofing-Tiles, of which the following is a specification, due reference being had to the accompanying drawings, which form part hereof.

My invention relates to the construction of what are generally known as metallic shingles for roofing; these shingles consisting of small metallic plates adapted to be secured to the boarding of a roof by nailing in the same way as wooden shingles or slates.

The object of my invention is to provide a lock-joint for such shingles, whereby each shingle can be locked on two or all four of its sides or ends to like neighboring shingles in such a manner as to effectually prevent the entrance of water through the joints onto the boarding of the roof.

Reference being now had to the drawings which illustrate my invention Figure 1 is a perspective view of a number of my improved shingles as applied to a roof, each shingle shown constructed to lock down on all four of its side edges. Fig. 2 is a view taken on the line *x*—*x* Fig. 1, and showing two of my shingles interlocked and secured to the roof boarding. Fig. 3 is a detail view of a corner of one of my plates designed to be locked down on all four of its side edges, showing its outline prior to being bent or shaped to form locking edges, and Fig. 4 is an under perspective view of the corner X, Fig. 1, and for an illustration of the opposite corner Y, the dotted lines represent the upper nailing flange.

Referring to the drawings in which the parts are indicated by numerals, similar numerals denoting like parts, 1, $1^{\times}$, $1^{\times\times}$, are my improved shingles, the opposite edges of which are bent or shaped as shown at 2, and 3. The edge 2 of my shingle is bent or shaped to the U-form $2^{\times}$ by doubling the metal upon itself in the manner best shown in Fig. 2, and the sheet is then carried outward on the plane of the main surface 1, a distance sufficient to form a nailing flange 4. The edge 3 of my shingle is also bent or shaped to a U-form in all respects similar to its opposite edge, without the nailing flange,—the ends of the U being aligned or nearly so.

5 represents the supporting boards to which the shingles are nailed.

6, is a nail for securing the nailing flange 4 to the support, while 7 is the usual projection formed in the bottom of the center of each shingle to accommodate the elevated seam of the neighboring shingles, and allow the upper plates to closely hug the lower ones.

In laying my shingles, the left hand shingle (Fig. 2) is first secured to the roof by the nailing flange 4. The U-end 3 of the next shingle to the right is then interlocked with the U-end 2 of the left hand shingle by simply forcing the parts together as shown in Fig. 2, to form a double-U lock seam, and by reason of such construction the parts hug each other so well and tightly as to effectually prevent the entrance of water through the joints.

It will be obvious that roofing plates or shingles embodying my invention may be constructed to lock down on two opposite sides only, or on all four sides if desired;—in the latter case the cutting of the metal at each corner to the double right angle, as shown at Q— Fig. 3, prevents in construction or working the metal the meeting seams in a single plate or shingle crossing each other, provides a free and independent locking edge, and avoids the excessive thickness of metal that would otherwise be resultant, and other attendant disadvantages in construction and laying.

Plates or shingles constructed in accordance with my invention effect a considerable saving in metal in construction over other known plates or shingles for similar purposes, are easily and cheaply made, readily put together or taken apart, and furnish a lock-joint for roofing plates or shingles that will effectually prevent the entrance of water onto the boarding of the roof.

Having now described my invention, I claim—

1. A metallic roofing plate or shingle having one edge bent, shaped or formed to sub-

stantially a U-shape by twice doubling or folding the metal upon itself, leaving a space between the surfaces of the metal on the second double or fold only; the opposite edge of the plate or shingle on the same side or surface similarly bent, shaped or formed and the metal of the second double or fold continued or extended away from and on the same plane with the body portion of the plate or shingle to form a nailing flange, the whole as constructed adapted to lock down with similar plates or shingles substantially as described.

2. A rectangular shaped metallic roofing plate or shingle its four edges formed to substantially a U-shape on the same side of the plate and on the same plane with the body portion thereof; two adjacent edges of the same having nailing flanges extending away from and on the same plane with the body portion of the plate or shingle, said nailing flanges being a continuation or integral portion of the metal forming their respective U-edge, the whole as constructed adapted to lock down on all four sides with similar plates or shingles, as shown and described.

3. The method of making metallic roofing plates or shingles having their four edges formed to substantially a U-shape on the same side of the plate and on the same plane with the body portion thereof, two adjacent edges of the same having nailing flanges extending away from and on the same plane with the body portion of the plate or shingle, said nailing flanges being a continuation or integral portion of the plate blank forming their respective U-edge, and so as to lock down on all four sides with similar plates or shingles, which consists in first cutting out the respective four corners of the metal blank to the double right angle Q, and then twice doubling the respective edges of the blank upon itself to substantially a U-shape, two adjacent corners of the metal blank having a deeper cut than the neighboring corners thereby providing for two adjacent nailing flanges, substantially as described.

In testimony whereof I have hereunto signed my name this 10th day of September, A. D. 1890.

ADAM A. SPAHMER, JR.

In presence of—
SAML. B. S. BARTH,
FRED. A. MYERS.