

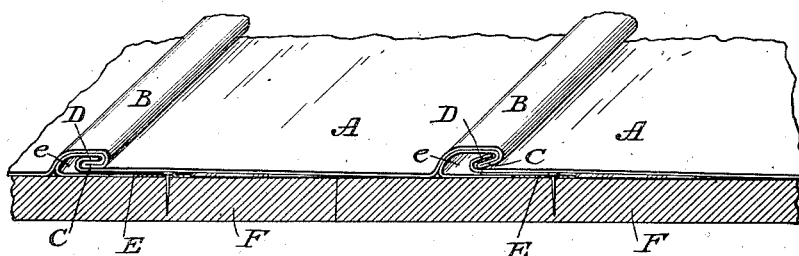
(No Model.)

F. L. HELLER.  
METALLIC SHINGLE.

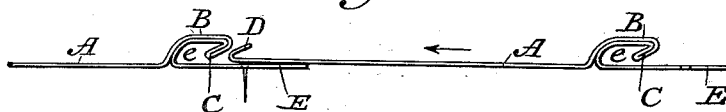
No. 453,743.

Patented June 9, 1891

*Fig. 1.*



*Fig. 2.*



*Attest:*

*A. H. Jespersen.*  
*C. M. Hutton*

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*Frederick L. Heller*  
*By David A. Burr*

*Atty.*

# UNITED STATES PATENT OFFICE.

FREDERICK L. HELLER, OF CALDWELL, NEW JERSEY.

## METALLIC SHINGLE.

SPECIFICATION forming part of Letters Patent No. 453,743, dated June 9, 1891.

Application filed January 7, 1891. Serial No. 376,994. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK L. HELLER, of Caldwell, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Metallic Shingles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to the construction of metallic shingles, and has for its object to obtain a more perfect lateral joint between such shingles when laid, and to facilitate and expedite covering a roof or other surface therewith.

It consists in a novel manner of folding or forming the opposite lateral edges of the shingles, substantially as is hereinafter described and claimed, whereby any two of them may be united by a simple lateral movement, which shall cause the folded edges to spring together and form a close lock-joint.

In the accompanying drawings, Figure 1 is a view in perspective of two of my improved shingles united and secured upon a roof to form the covering therefor, and Fig. 2 an end view of a loose shingle placed in readiness to be slipped laterally and snapped under the edge of the adjacent fixed shingle.

These shingles A A are constructed simply of plates of sheet metal of convenient size for handling, and which are adapted to be laid side by side and united in rows to form a covering for the roof or other exposed surface of a building, the rows being made to overlap each other in the customary manner to shed the water falling thereon. Each metallic plate or shingle A is bent or folded longitudinally near to one edge thereof, as at B, so as to form a longitudinal hook C to extend from end to end of the plate, the terminal of the hook being made to project inwardly within the recess of the fold, as shown in the drawings. The fold B is made of such width as to provide for an interval *e* within its recess, exceeding in width that of the re-entrant hook C. The hooked fold B is formed at such a distance from the proximate edge of the shingle as to leave an intervening strip E, which, extending outward from the fold B on the same plane as the main portion of the

sheet, forms a flange through which the nails are driven to secure the shingle to its supporting-board F. The opposite parallel edge of each shingle is bent to form a single longitudinal hook D of a width equal to the width of the re-entrant hook C of the opposite fold, this hook D being formed upon the same side of the plate as the hook C, its point having, however, an upward inclination from the outer face of the plate, the reverse of the hook C, which inclines downward toward said face. In securing these shingles upon the supporting-boards F, therefore, the first shingles laid to overlap each other from the lowest portion of the roof or side of the building upward are severally secured by nails driven through the nailing-flange E of each. The shingles of the next course of shingles are then severally slipped laterally, each as indicated by the arrow in Fig. 2, toward the hooked fold of the fixed shingles, so as to carry the simple hooked edge D of the one under the intumed hooks C of the other. As the hooks are elastic, they will each yield and bend inward as the plates are forced together by this lateral pressure until the hook D has passed into the recess *e*, whereupon they will spring outwardly and thereby interlock, so as to prevent positively their lateral operation. A complete locked joint is thus formed, which cannot be sprung open or separated under any circumstances other than by a longitudinal movement of one of the shingles operating to slide one of the hooked edges lengthwise out from the other. This lock-joint is not only perfectly secure, but, as will be seen, admits of being quickly and easily made without the necessity of lifting or turning either plate, and at the same time allows full freedom for an expansion and contraction of the plates without being affected thereby. It differs from other forms of hook-joints heretofore applied to the union of metallic shingles, in that it does not require that the shingle to be connected to that already fixed on its supporting-board shall be turned up to cause its edge to enter the joint, and that it dispenses with the necessity of an extra longitudinal projection on the nailing-flange to maintain the engagement of the hooks and form the lock. Hence by my invention not only is the cost of manufacture reduced, but the application

of the shingles to the roof or other supporting-surface to be covered is so greatly facilitated as to reduce materially the cost thereof, while the joint itself is more secure than any other known to the art.

I claim as my invention—

1. A metallic roofing-plate or shingle having a flat margin, as E, left along one of its lateral edges to serve as a nailing-strip, with the body of the plate doubled upon itself inside of said nailing-strip or margin and folded over toward the nailing-strip to form a longitudinal inwardly-bent or downwardly-turned hook, as B, and having the opposite lateral edge of the plate bent upward to form a single longitudinal upwardly-turned hook, as D, adapted to overlap the nailing-strip of a corresponding plate and to spring under its hooked fold to form an interlocked joint therewith, substantially in the manner and for the purpose herein set forth.

2. The combination, in a metallic shingle, of a plain margin, as E, forming a nailing-strip along one of its lateral edges, a longitudinal rib, as B, having an inwardly-bent free edge formed inside of the nailing-strip by folding the plate upon itself and bending the double fold over toward the nailing-strip parallel therewith in a wide hook, and a single longitudinal hook, as D, formed upon the opposite free lateral edge of the plate by bending said edge upward, substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK L. HELLER.

Witnesses:

A. N. JESBERA,  
E. M. WATSON.