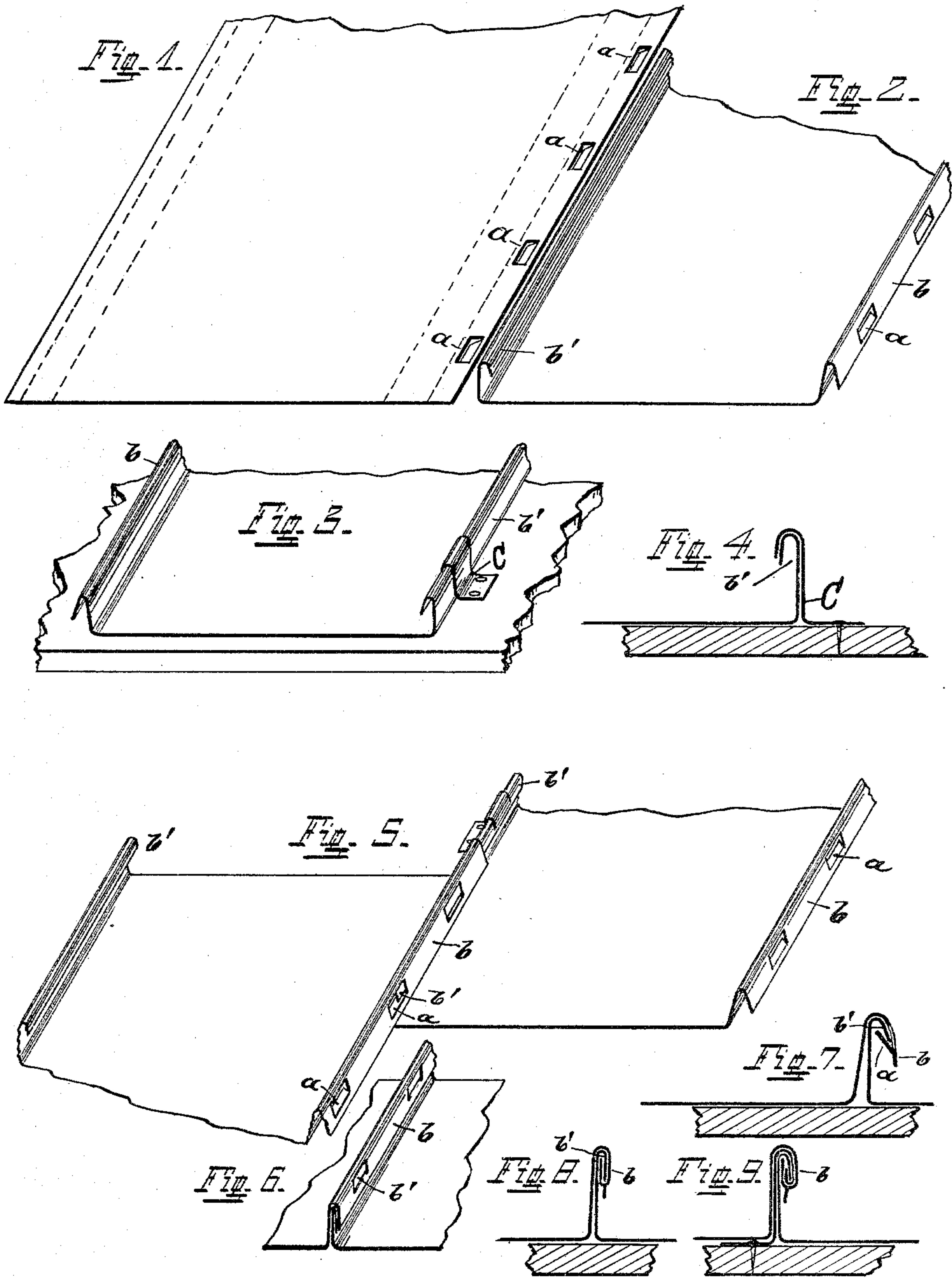


(No Model.)

L. L. SAGENDORPH.  
METALLIC ROOFING.

No. 412,043.

Patented Oct. 1, 1889.



Attest  
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# UNITED STATES PATENT OFFICE.

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## METALLIC ROOFING.

SPECIFICATION forming part of Letters Patent No. 412,043, dated October 1, 1889.

Application filed July 11, 1889. Serial No. 317,212. (No model.)

*To all whom it may concern:*

Be it known that I, LONGLEY LEWIS SAGENDORPH, a citizen of the United States, residing at Cincinnati, in the county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Metallic Roofing-Sheets, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The object of my invention is to so construct the side flanges of a roofing-sheet as that the inturned hooked flange of one sheet will engage with inturned spurs cut from the outward-turned flange on the adjacent sheet, as will more fully hereinafter appear.

In the accompanying drawings, Figure 1 is a plan view of the end portion of a roofing-sheet before the side interlocking flanges are bent, showing the position of the spurs cut in one of said flanges; and Fig. 2 is a perspective view of one end of the sheet after the side flanges are bent to position. Fig. 3 is a view the reverse of that shown in Fig. 2, showing one of the retaining-cleats in position; and Fig. 4 is a vertical section on an enlarged scale through the flange and cleat shown in Fig. 3. Fig. 5 is a perspective view of the end portions of two sheets of roofing, said view showing the left-hand sheet in the act of being slipped to place over the hooked flange of the other sheet. Fig. 6 is a perspective view of the standing seam produced by the union of my improved sheets. Fig. 7 is a vertical cross-section through the side flanges and one of the interlocking spurs before being clamped or pressed to place, and Fig. 8 is a view showing said flanges and spur locked to place. Fig. 9 is a vertical cross-section through the flanges, cleat, and interlocking spur in a locked position.

My invention consists in forming inward-projecting spurs *a* from the downward projection of flange *b* on one side of the roofing-sheet, the flange *b'* on the other side of the sheet being bent and hooked inward in the same direction that flange *b* is bent. The spurs *a* are formed by cutting the metal at three sides thereof, and forcing the metal between said cuts inward, as shown.

My improved roofing-sheets are applied and connected as follows: A suitable cleat *C*, bent

to conform to flange *b'*, is hooked over the latter and nailed to the sheeting, as shown. This cleat serves to anchor one side of the sheet to the sheeting. Having properly secured the first row of roofing-sheets to place, the flange *b* of the adjacent sheet is slipped over the flange *b'*, and in such a manner that said latter flange will slide between the spurs *a* and the inner face of flange *b*, as is more clearly shown in Figs. 5, 6, and 7. Having slipped the overlapping sheet to place, the flanges, spurs, and cleats are firmly compressed and locked, as shown, by a suitable clamping-tool. The spurs *a* serve to retain the overlapping sheet firmly in contact with the flange of the lower sheet. Each successive row of roofing-sheets is applied and connected in the manner just described.

The advantages of my improved roofing-sheet are apparent. By forming the interlocking spurs in the one side flange to engage the flange of the adjacent sheet a standing seam is provided which is perfectly watertight and free from any overlapping cleats, thus saving the material usually employed in the overlapping cleats to retain the top sheet in contact with the lower sheet, as the spurs cut from the outside flange will retain said top sheet in position. The roof is ready of application, presents a neat appearance, is durable, and will admit of all requisite expansion and contraction.

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

1. A sheet of metal roofing provided on one side with an outward-projecting flange having inward-projecting spurs on its downward extension, the opposite side of said sheet having an inturned flange, substantially as set forth.

2. In a metal roof, the combination of inturned flange *b'*, cleat *C*, and the outward overlapping flange *b*, the cleat *C* fitting over flange *b'* and nailed to the sheeting, said flange *b'* engaging between the spurs *a* and the inner face of flange *b*, substantially as set forth.

LONGLEY LEWIS SAGENDORPH.

Witnesses:

GEO. M. VERETY,  
RAYMOND LLOYD.