

G. HESS.
METALLIC-ROOFS.

No. 175,283.

Patented March 28, 1876.

Fig. 1

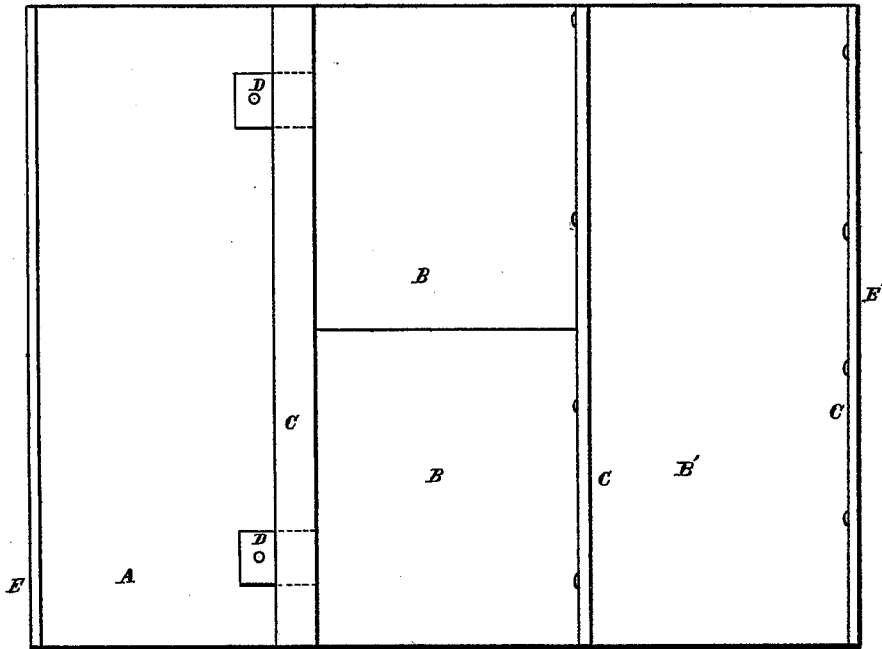


Fig. 2

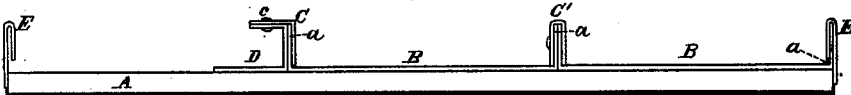


Fig. 3.

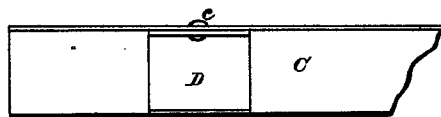
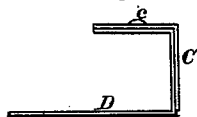


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

GUSTAVUS HESS, OF NORWALK, OHIO.

IMPROVEMENT IN METALLIC ROOFS.

Specification forming part of Letters Patent No. **175,283**, dated March 28, 1876; application filed January 3, 1876.

To all whom it may concern :

Be it known that I, GUSTAVUS HESS, of Norwalk, in the county of Huron and State of Ohio, have invented a certain new and Improved Metallic Roof; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawings, making a part of the same.

Figure 1 is a plan view of the roofing when laid. Fig. 2 is an end view. Figs. 3 and 4 are detached sections.

Like letters of reference refer to like parts in the several views.

This invention relates to sheet-metal roofings, whereof the following is a description :

In the drawings, A represents the roof-boards, to which the sheets of metal B B' are secured. The sides of each of said sheets are turned up at right angles, forming a flange, as will be seen at *a*, Fig. 2. C are caps covering two flanges of contiguous sheets of roofing. D is a cleat whereby the sheets are secured to the roof-boards.

The cap C, referred to, consists of a strip of metal bent longitudinally at a right angle, as shown in Figs. 3 and 4. To said cap is secured, by a rivet, *e*, the cleat D, alluded to, as will be seen in said Figs. 3 and 4. The number of cleats thus secured to a cap may be more or less, according to the length of the cap and degree of security desired in the attachment of the sheet to the roof.

The sheets are secured to the roof as follows: The sheet B, Fig. 2, is first laid upon the roof, as shown in Fig. 1. The cap C is then placed upon the edge of the upturned flange *a*, so that one side of the cap will be along and close to the side of the flange, while the other side of the cap will be horizontal in respect thereto, as will be seen in Fig. 2, in which it will be observed that the cleat or cleats D are on the opposite side of the flange, thereby holding the flange between the cleat or cleats and the side of the cap. The foot of the cleat (formed by bending the end thereof at a right angle, as shown in Figs. 2 and 4) is nailed to the

roof-boards. All the cleats are riveted or otherwise secured to the cap when thus nailed down, as shown at D in Fig. 1. The second sheet of roofing is then put down by inserting the flange thereof under the horizontally-projecting side of the cap and cleat, covering the foot or that part of the cleat nailed to the roof-boards, while the upright part of the cleat is covered by the flange of the second sheet, which is made to lie close against that of the first sheet, which may be represented by B', and the second sheet by B, Fig. 1. The horizontal side of the cap is now turned down and firmly closed against the flange, thereby embracing or clamping the flanges of both sheets B and B' between its sides, as will be seen at C', Fig. 2, thus completing the work.

It will be observed that the cleats, and the nails whereby they are fastened to the roof, are covered entirely by the cap and roofing-sheets, so that there is no exposure of either to the weather. The caps exclude the rain, wind, and snow from between the upturned flanges *a* of the sheets, and at the same time allow of the expansion and contraction of the sheets by the heat and cold, thereby preventing them from buckling and straining upon the nails and fastenings.

It will be seen that no soldering is required for laying the roofing, and that all of the several parts can be prepared in the shop ready to be immediately laid without further preparation.

To secure the ends of the sheets to the roof, a clamp, E, Fig. 2, is nailed to the side of the cornice, under which the flange of the sheet is held, as shown in said Fig. 2.

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

The cleat or cleats D, secured to and in combination with the cap C, in the manner as described, and for the purpose set forth.

GUSTAVUS HESS.

Witnesses:

W. H. BURRIDGE,
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