

J. S. Haywood,
Metal Roofing.
No. 110,567. Patented Dec. 27, 1870.

Fig. 1.

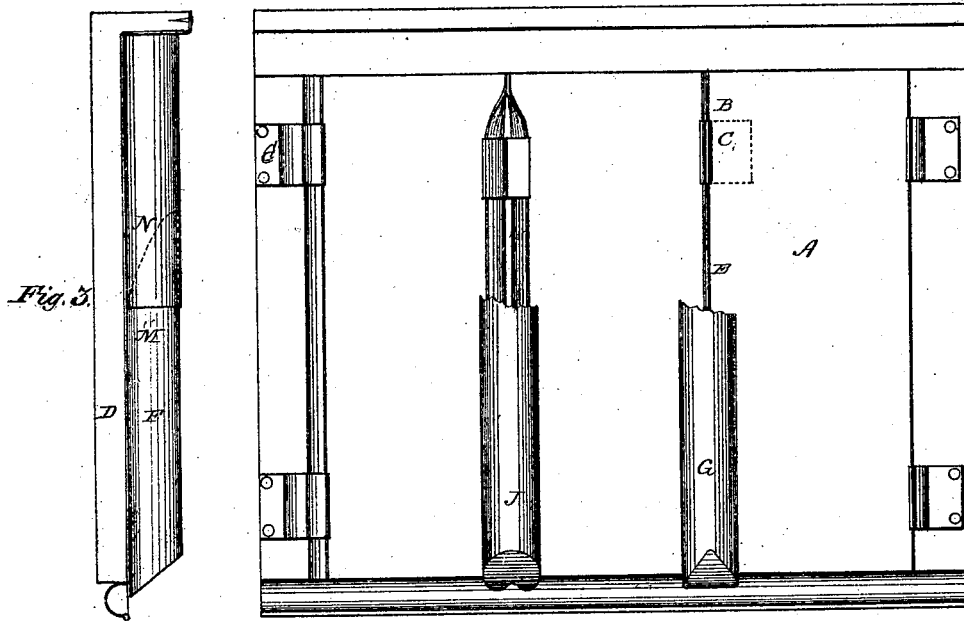


Fig. 2.

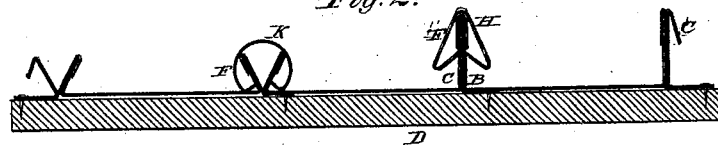


Fig. 4.

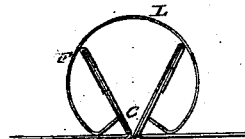
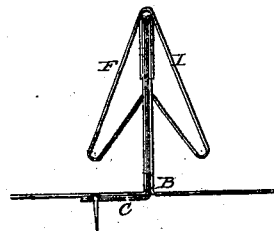


Fig. 5.



Witnesses:

Phil. T. Dodge,
Henry M. Lygate

Inventor:

J. S. Haywood
by Dodge & Munn
his attys.

United States Patent Office.

JOHN S. HAYWOOD, OF ROCHESTER, MINNESOTA.

Letters Patent No. 110,567, dated December 27, 1870.

IMPROVEMENT IN METAL ROOFS FOR BUILDINGS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN S. HAYWOOD, of Rochester, in the county of Olmstead and State of Minnesota, have invented certain Improvements in Metal Roofs for Buildings, &c., of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to metal roofing, and consists in a novel method of attaching the metal sheets to the sheathing-boards by small metallic clips so as not to puncture the sheet-metal; and also in the novel construction and arrangement of a metal cap over the adjoining upright edges of the sheets and attaching-clips.

In the drawing—

Figure 1 is a top plan view, with portions broken away;

Figure 2 is a transverse vertical section of fig. 1;

Figure 3 is a side view; and

Figures 4 and 5 are vertical cross-sections, showing two different-shaped caps, and different portions of adjoining sheets.

In constructing or laying this roof, the metal sheets are formed into strips, A, and have their longitudinal edges B bent up at a right or acute angle, as clearly shown in figs. 2, 4, and 5.

Clips or fasteners, C, formed of the same or other suitable metal, are then applied for attaching the metal sheets to the roof-sheathing D. These clips are made by taking a piece or strip of sheet-metal, of any suitable width, and of the requisite length, and doubling or folding it in the center, and then bending its doubled or folded end at right angles with its length, and are applied, either by being first nailed to the sheathing before the metal sheets are laid, or, if after they are laid, by raising up their edges, and then nailing, as shown in figs. 2 and 5, and then, when thus nailed fast, their upper ends are bent over the upper or upright edges of the adjoining sheets, which are brought together, and as shown in the figures. By this construction and application of the clips C, it will be seen that the sheets are firmly secured, and without puncturing them.

Over or upon the upright edges or ribs E of the sheets A, with their clips C, is placed a cap, F.

This cap is made by bending a strip of sheet-metal in the form shown at G in fig. 1; also, in cross-section at H in fig. 2, and at I in fig. 5; that is, with

its sides inclined outward, and its edges bent in under and upward, as shown, and is then slid or placed upon the ribs E, as shown. When in this position it will be seen that they entirely cover the joint formed by the union of the two sheets of metal with their fastening.

Instead of having the caps F shaped or formed as shown at G, fig. 1, and at H and I, figs. 2 and 5, respectively, they may be shaped as shown at J, fig. 1, and at K and L, figs. 2 and 4, respectively; that is, curved, and with their edges bent in and upward, as shown. When the caps are of this form it is obvious that the edges of the sheets or strips A may be bent apart, as shown at K and L, figs. 2 and 4.

These caps, whether with a circular or angular top, are formed in sections, and so that their adjoining ends may slide the lower one, M, into the upper one, N, on the incline of the roof, as clearly shown by the dotted lines in fig. 3.

A metal roof constructed and fastened in this way, it will be seen, requires no soldering along the line of its ribs E, and yet is perfectly tight. And, as its clips C are only attached on one side of the joint, it will also be seen that the nails with which they are fastened will not be liable to be loosened by the expansion and contraction of the metal, as the connection of the metal is not rigid. In this way, I make a metal roof that is simple in construction and durable, with an unsoldered joint, so as to allow for contraction and expansion, and covered by a novel strip, protecting it from the weather.

Having thus described my invention,

What I claim is—

1. The clip or cleats C, consisting of a single piece of tin, folded in the middle and having its ends hook-shaped, when applied as herein shown and described, for permanently securing the adjoining edges of a metallic roof to its sheathing, as set forth.

2. In combination with the upturned edges or ribs E of the adjoining metal sheets forming the roof, the cap F and clips or cleats C, when constructed and arranged as herein shown and described, and for the purpose set forth.

J. S. HAYWOOD.

Witnesses:

O. C. JONES,
C. H. STILE.