S. R. Hathany,
Roofing.

Nº93,301.

Fatented Aug. 3.1869.

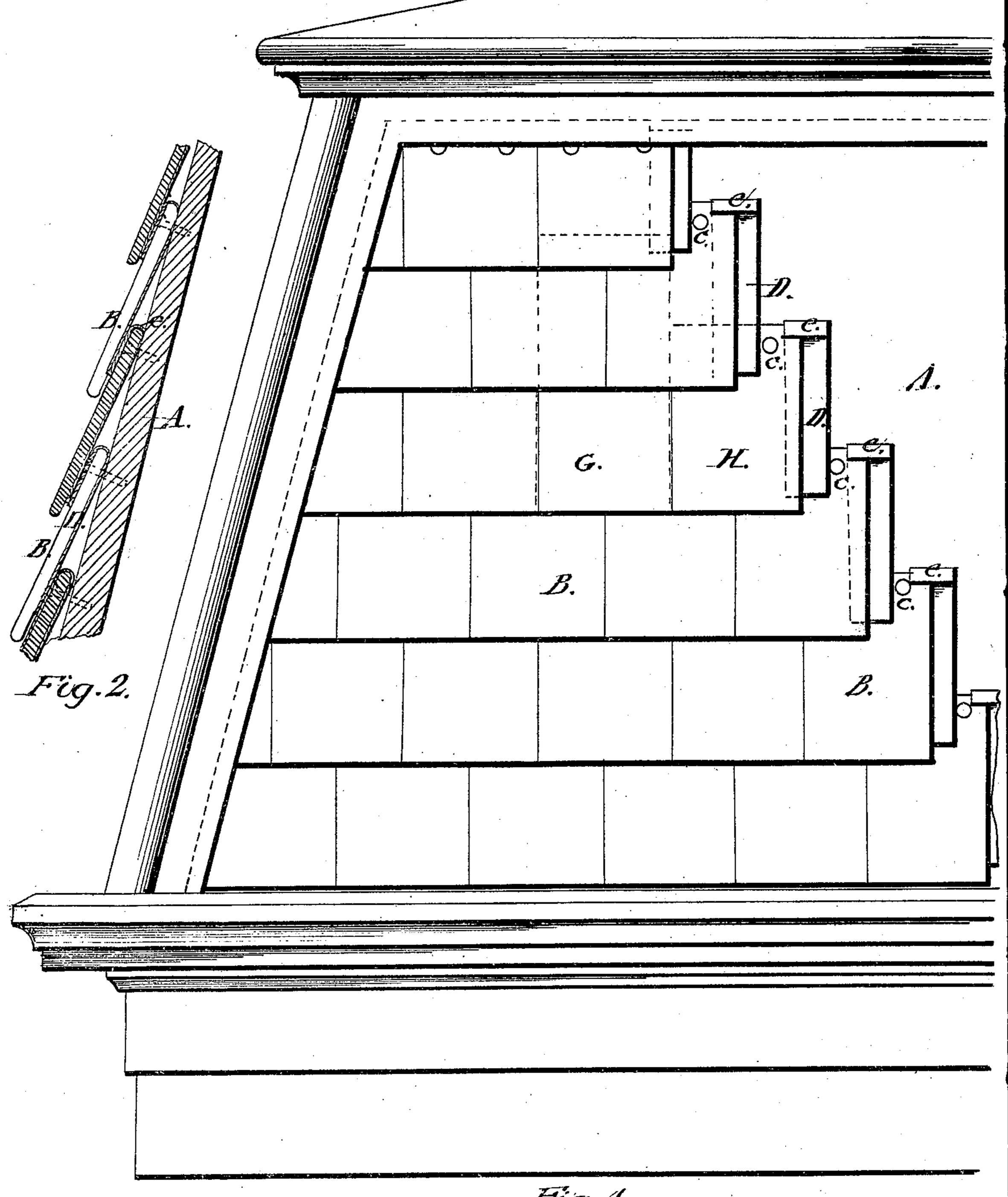


Fig.1.

Mittieesses: Thos. 46. Dodge. Lo. H. Miller

Trevertor: S.R. Hattwarn

NIPETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

## Anited States Patent Office.

## S. R. HATHORN, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 93,301, dated August 3, 1869.

## IMPROVED SLATE AND METAL ROOFING.

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

Know all men by these presents:

That I, S. R. HATHORN, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Slate and Metal Roofing; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which-

Figure 1 represents a view of so much of a roof as is necessary to illustrate my improvements, and

Figure 2 represents a vertical section of the same

through the slating.

To enable those skilled in the art to which my invention belongs, to make and use the same, I will proceed to describe it more in detail.

The nature of my invention consists in the combination, with slates, of pieces of sheet-metal, constructed in the manner shown, and as hereafter described.

It also consists in the peculiarly-constructed metallic joint-pieces, as hereafter set forth.

In the drawings—

A indicates the enclosing boards of the roof, to which

the slates B are secured by nails c.

Strips of metal D are placed beneath the joints between the slates, as shown in the drawings, their upper ends being bent in form of hooks e, which hook on to the top edges of the slates B, thus preventing the strips of metal from sliding out of place.

The strips D may be made of copper, tin, zinc, or

any other suitable material, and may be made either flat or with their edges folded over at the sides, as shown at f, which latter method may be necessary on roofs where the inclination is less than thirty degrees.

The old method of laying slate roofing, required slates long enough to lap under the second course, above, from one to two inches, according to circumstances, making the slates of the size indicated by red lines at G, fig. 1. This is necessary to protect the joints.

But with my method of combining slate and metal, the slates may be made much shorter, as shown by dotted lines at H, fig. 1, thereby making a saving of nearly one-third of the amount of slate required, while at the same time a firmer roof is produced.

Having described my combined slate and metal roofing,

What I claim therein as new, and of my invention, and desire to secure by Letters Patent, is-

1. The combination, with the slates B, of the metallic strips D, provided with hooks e, substantially in the manner described and for the purposes stated.

2. The metal joint strips D, formed with side flanges f and top hooks e, substantially as and for the purposes set forth. S. R. HATHORN.

Witnesses:

THOS. H. DODGE, GEO. H. MILLER.