

(No Model.)

L. S. BONBRAKE.
METAL ROOFING.

No. 495,875.

Patented Apr. 18, 1893.

Fig. 1.

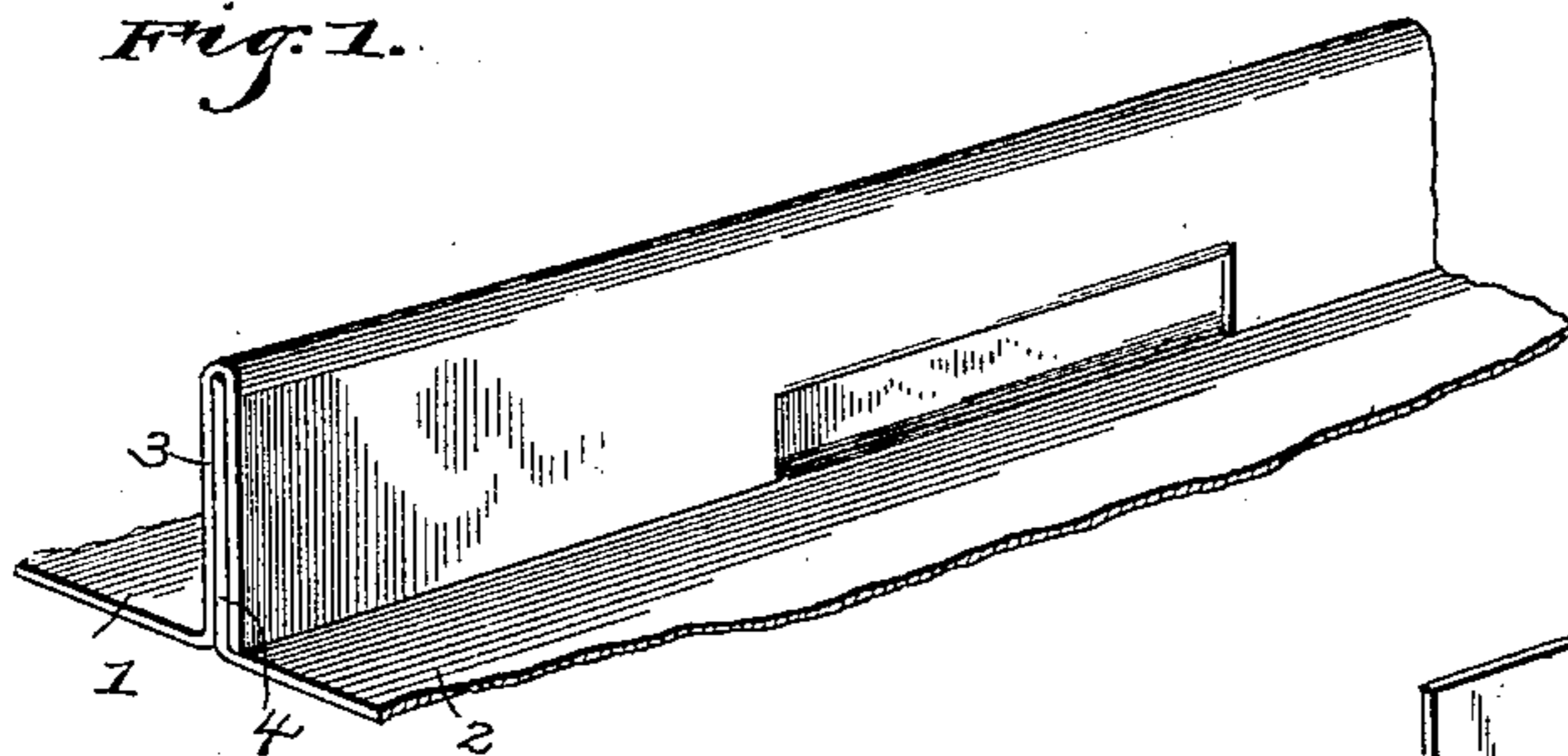


Fig. 2.

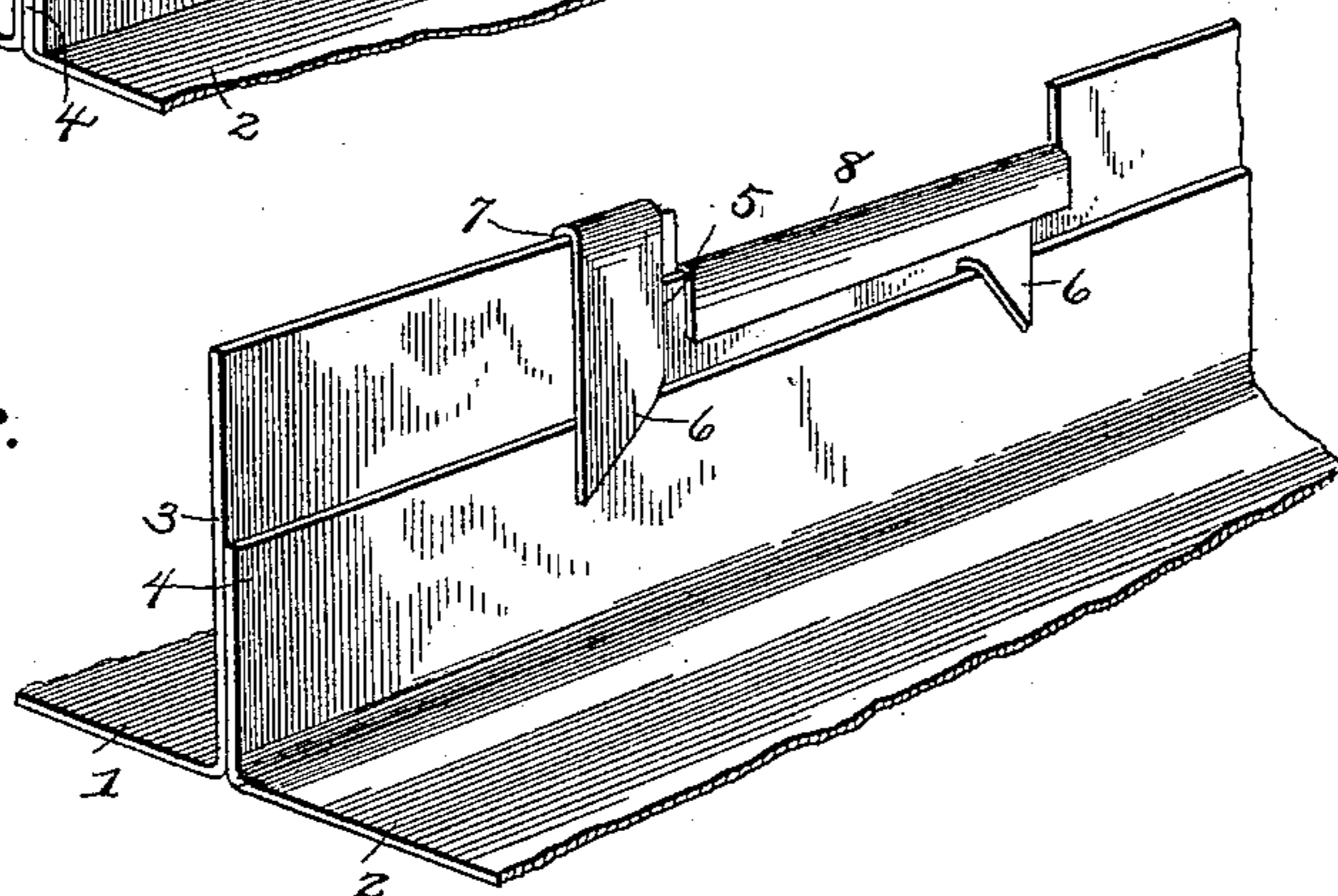


Fig. 4.

Fig. 3.

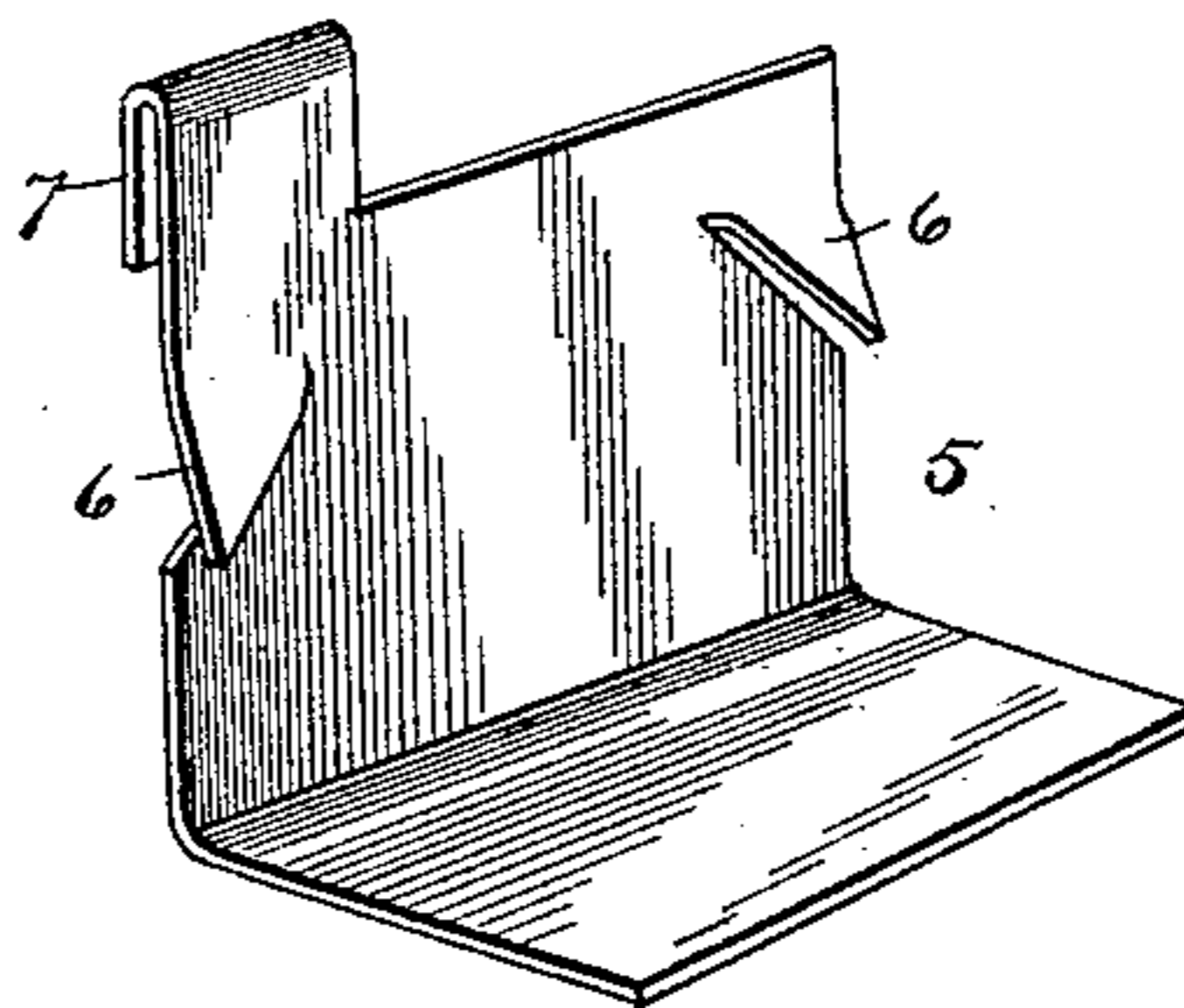
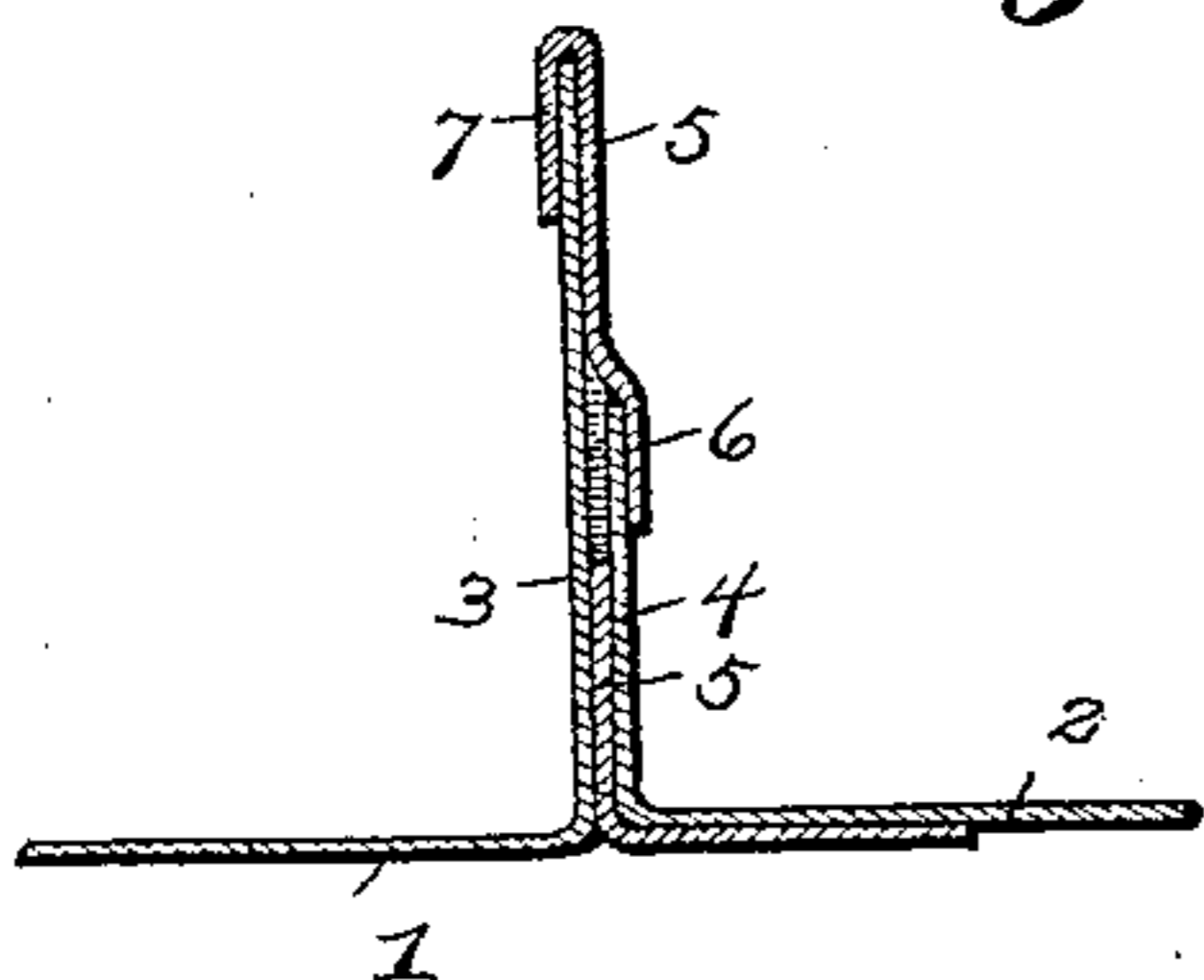
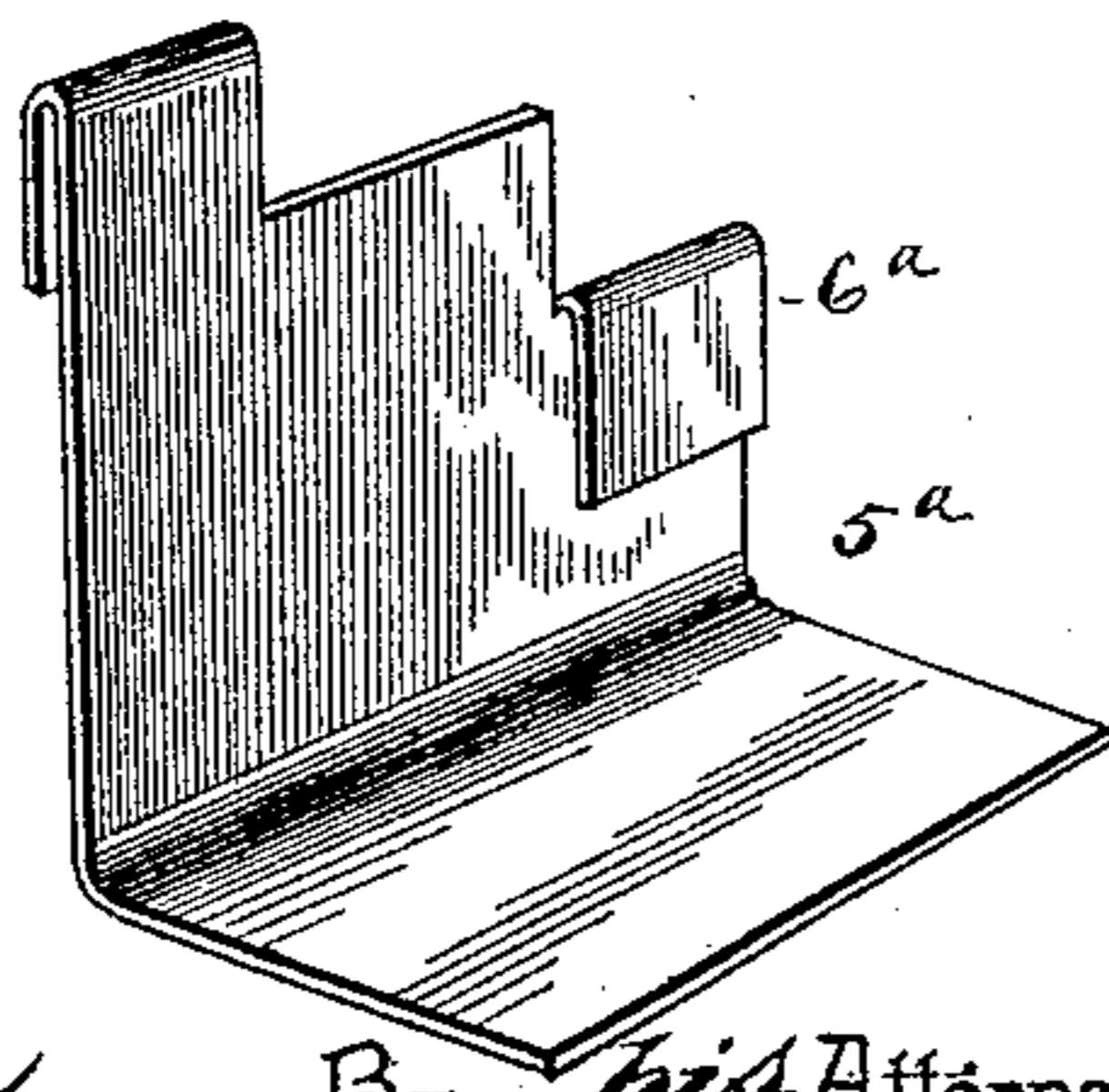


Fig. 5.



Witnesses

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By *his* Attorneys,

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UNITED STATES PATENT OFFICE.

LEWIS S. BONBRAKE, OF WAYNESBURG, OHIO.

METAL ROOFING.

SPECIFICATION forming part of Letters Patent No. 495,875, dated April 18, 1893.

Application filed June 30, 1892. Serial No. 438,601. (No model.)

To all whom it may concern:

Be it known that I, LEWIS S. BONBRAKE, a citizen of the United States, residing at Waynesburg, in the county of Stark and State of Ohio, have invented a new and useful Metal Roofing, of which the following is a specification.

The invention relates to improvements in metal roofing.

10 The object of the present invention is to simplify and improve the construction of metal roofing, to facilitate the laying of the same by providing means for holding the sheets in position preparatory to folding the seam, and
15 to provide an effectual seam.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed
20 out in the claims hereto appended.

In the drawings—Figure 1 is a perspective view of a portion of a sheet metal roof embodying the invention. Fig. 2 is a similar view showing a portion of a seam, the parts
25 being in position preparatory to receiving the finishing bend or fold. Fig. 3 is a transverse sectional view. Fig. 4 is a detail perspective view of the cleat. Fig. 5 is a similar view showing a modification of the cleat.

30 Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 and 2 designate roofing sheets having their longitudinal edges 3 and 4 bent upward
35 to form flanges, the former being higher than the latter, and being adapted to be bent over the latter in completing the seam. The sheets 1 and 2 are secured to a roof by cleats 5 which are L-shaped and have their horizontal portions nailed or otherwise fastened
40 to the roof, and each of which has its vertical portion provided at opposite sides below the upper edge with inclined cuts forming depending clips 6, which receive between
45 them and the body of the cleat, the shorter flange 4 of the sheet 2. The cleat is provided at its top with a tongue 7 which is bent over the top of the higher flange 3, and holds the same down and retains the sheet 1 in proper
50 position while forming the seam. The higher flange 3 is provided with an overlapping flange 8 extending over the upper head of the vertical portion of the cleat and forming a short hem. This construction is facilitated
55 by arranging the clips below the upper edge

of the anchor piece or cleat. The flange 8 is formed by cutting a portion of the upper edge of the higher flange 3 of the sheet 1. The seam is completed by bending or folding the upper portion of the higher flange 3
60 and the cleat 5 over the shorter flange 4 of the sheet 2, thereby forming a secure and water tight seam.

The clips 6 which are formed by the inclined cuts are triangular, but other forms
65 of clips may be employed as shown in Fig. 5 of the accompanying drawings.

In Fig. 5 of the accompanying drawings the cleat 5^a is provided at one side with a vertical cut and the partially severed portion is
70 folded down below the upper edge to form a clip 6^a.

What I claim is—

1. In a sheet-metal roofing, the combination of a roofing sheet 2 having a short flange, a roofing sheet 1 having a higher flange and provided at the edge of the same with the overlapping flange 8 forming a hem, and the cleat having its vertical portion arranged between the flanges of the sheets and provided
75 at its top with a tongue extending over the edge of the higher flange and provided at its side below the upper edge with a clip engaging the upper edge of the short flange, the upper edge of the cleat being arranged within
80 in said hem, and the upper portion of both the cleat and the higher flange being bent over on the short flange, substantially as described.

2. In a sheet metal roofing, the combination of a roofing sheet 2 having a short flange, a roofing sheet 1 having a higher flange provided at the top with an overlapping flange 8 forming a hem, and a cleat provided at its top with a tongue to engage the upper edge
95 of the higher flange and having at opposite sides inclined cuts forming clips engaging the upper edge of the lower flange, the upper edge of the cleat being arranged within said hem and the upper portion of both the cleat
100 and the higher flange being bent over on the short flange, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LEWIS S. BONBRAKE.

Witnesses:

E. H. JEFFRES,

B. F. CLOUD.