

(No Model.)

E. SCHUMACHER.
ROOFING.

No. 442,920.

Patented Dec. 16, 1890.

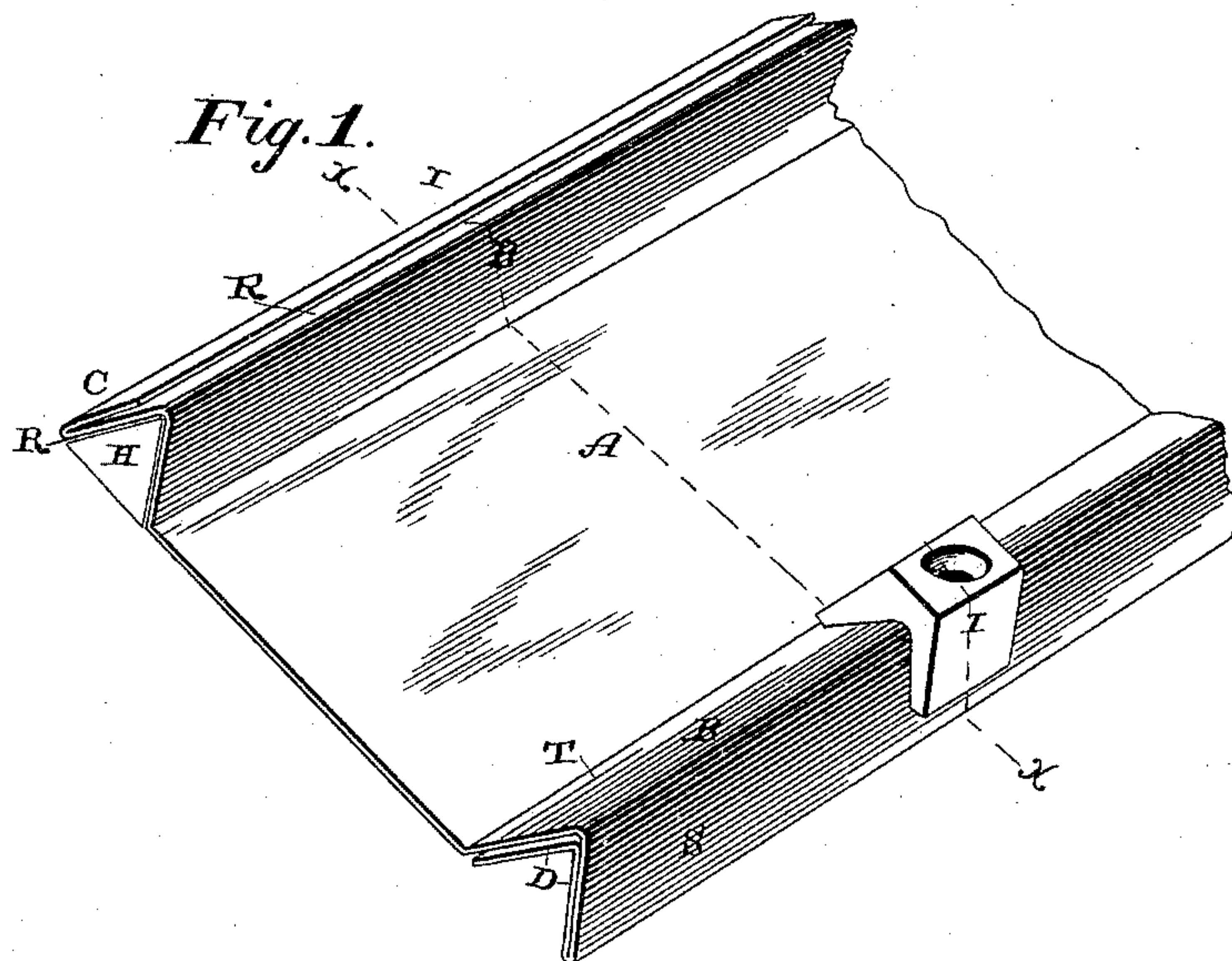
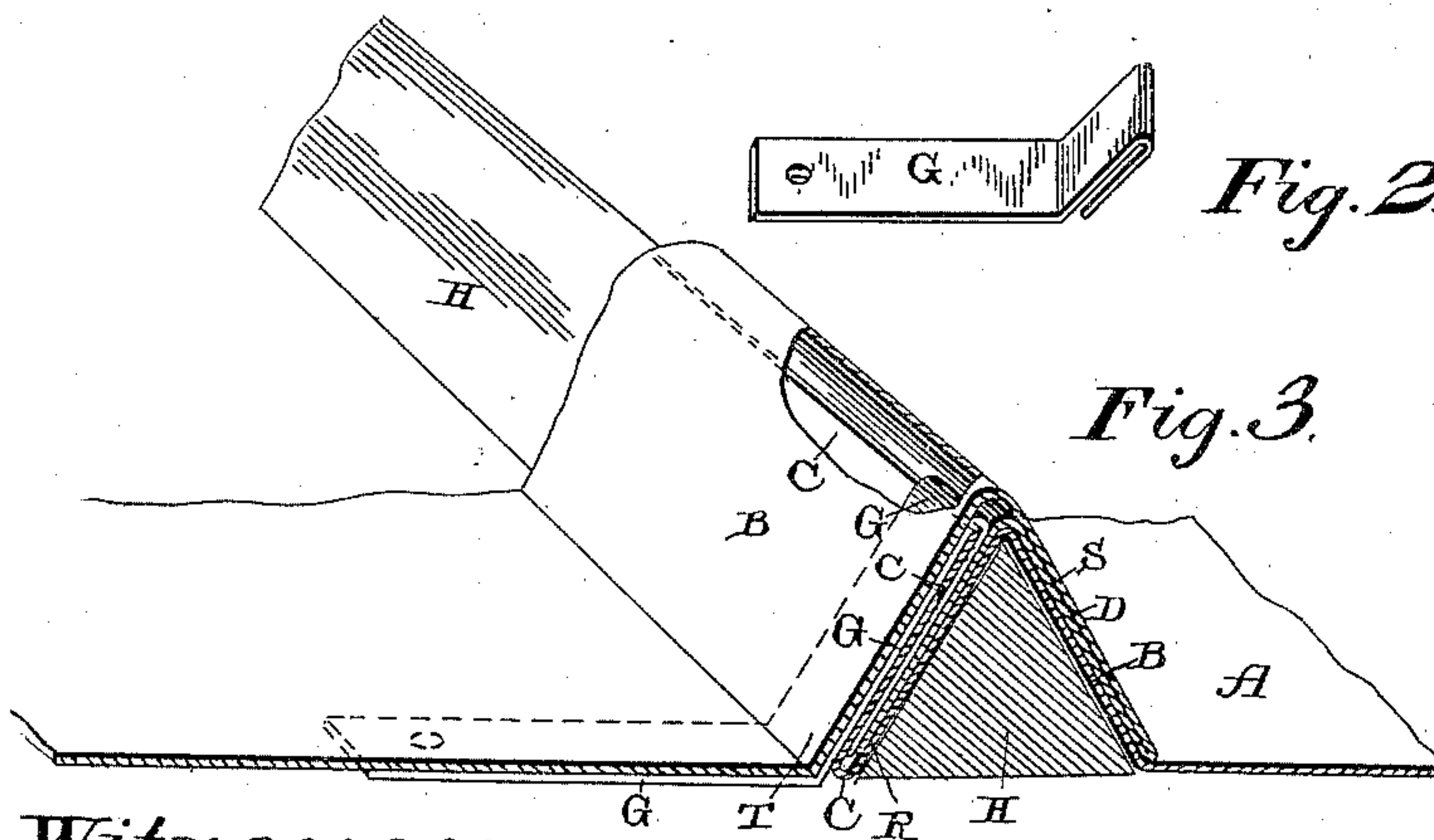


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

EMIL SCHUMACHER, OF LITCHFIELD, ILLINOIS.

ROOFING.

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To all whom it may concern:

Be it known that I, EMIL SCHUMACHER, of Litchfield, in the county of Montgomery and State of Illinois, have invented certain new and useful Improvements in Roofing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in roofing; and it consists in the construction and arrangement of parts, which will be fully described hereinafter.

The objects of my invention are to provide a metallic roofing, the plates of which are made to interlock and form tight joints without the necessity of soldering, to fasten the separate plates in position upon the roof by means of cleats which are so shaped as to interlock with the outwardly-turned edges of the ridges, and to fasten the plates in position by means of cap-plates or castings which fit over the top of the ridges and through which a nail or screw is passed.

Figure 1 is a perspective of one of the plates which embody my invention. Fig. 2 is a detached view showing the cleat by which the plates are fastened in position upon the roof. Fig. 3 is a sectional perspective taken on the dotted line *x x* of Fig. 1.

A represents one of the plates from which my metallic roofing is formed, and which has a V-shaped ridge B formed along each of its opposite edges. One of these ridges has its edge C turned outwardly and upwardly along the outer wall R of the ridge, and which edge extends about as high as the top of the ridge. The ridge upon the opposite side has its edge D doubled inward and upward along the outer wall S of the ridge and then downward along its inner wall T, and the extreme edge of this turned-in part D extends down almost, if not quite, to the inner edge of the ridge, thus practically forming a double ridge along this side of the plate. In attaching these plates upon the roof the inner edge of the turned-in portion D catches over the top of the turned-up edge C, thus forming at each joint four separate and distinct thicknesses of metal. This joint does not have to be soldered, but forms

a tight joint without it. In order for the water to be blown through or under the seam of the joint it would have to stand on the roof the whole depth of the ridge. Should the water be driven in under the seam and even over the ridge in its passage down the opposite side of the ridge, it would be received by the turned-up edge C, which would carry it off the roof.

To keep the ridges in shape, triangular-shaped rods H are nailed or placed upon the roof, and these rods prevent the ridges from being flattened out when trodden upon.

To fasten the plates to the roof, the cleat G is used, which has its end bent, as shown, so as to catch over the turned-up edge C, and then the lower end of the cleat is nailed to the roof. By this construction the cleat is entirely covered over and not exposed to the weather, and it is applied and tacked in position before the adjoining plate is put in position. After the plates G are nailed in position the edge D is forced in between the said plate and the outer wall of the ridge.

In case it is desired to secure the roofing in position by means of screws or nails, iron cap-plates I, which are shaped so as to straddle over the ridges, are used. The nails or screws then pass down through these cap-pieces, through the ridge, and into the boards underneath.

This metallic roof is adapted especially for cars, and owing to the construction here shown it makes a practically water-tight roof, and can be applied by any one, whether experienced or not. This roofing can be made to extend entirely across the top of the cars, no matter what shape the top may have, as the roofing can be given the proper curve to fit the surfaces perfectly. By means of the cleats, the nailing at the edge of the car, and the fastening made by the running-board on the top of the car, the roof will be secure. The cap-pieces are not necessary on ordinary box-car roofs, but on some kinds of work they are desirable.

A roof constructed as here shown and described requires no skill to apply it and no solder to make a tight joint, and hence is more than ordinarily cheap and reliable.

Having thus described my invention, I claim—

1. A roofing-plate having its edges formed into ridges, the edge of one ridge being doubled outward and upward along the outer wall of the ridge, and the opposite edge of the plate doubled inward and upward along the outer wall of the ridge, and then downward along its inner wall, whereby the two edges interlock in the manner shown and described.
2. A roofing-plate having along one edge a ridge, and the edge of the plate doubled outward and upward along the outer wall of the ridge, and its opposite edge having an inner and outer ridge, the inner wall of the inner ridge being the edge of the said plate, whereby the two edges interlock in the manner shown and described.
3. The combination, with a roofing-plate having an inner and an outer ridge at one edge, the edge of the plate terminating in the inner wall of the inner ridge, and a ridge at its opposite edge having its edge bent outward and upward along its outer wall, of the plates G, which have their upper ends doubled downward, as shown, whereby they catch in between the edge of the last said ridge and its outer wall, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

EMIL SCHUMACHER.

Witnesses:

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