

(No Model.)

J. E. CARROLL.
ROOF VALLEY.

No. 373,129.

Patented Nov. 15, 1887.

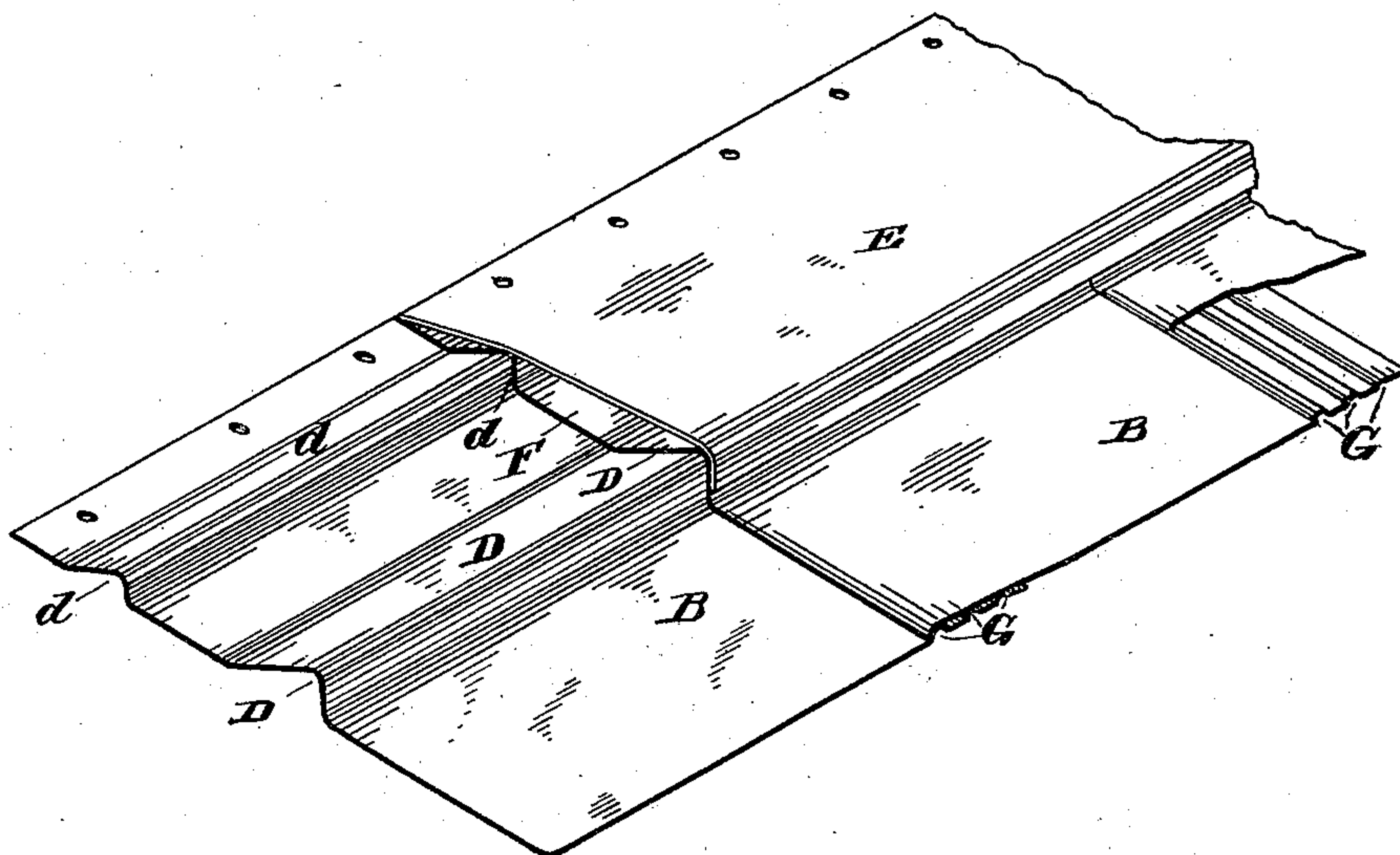
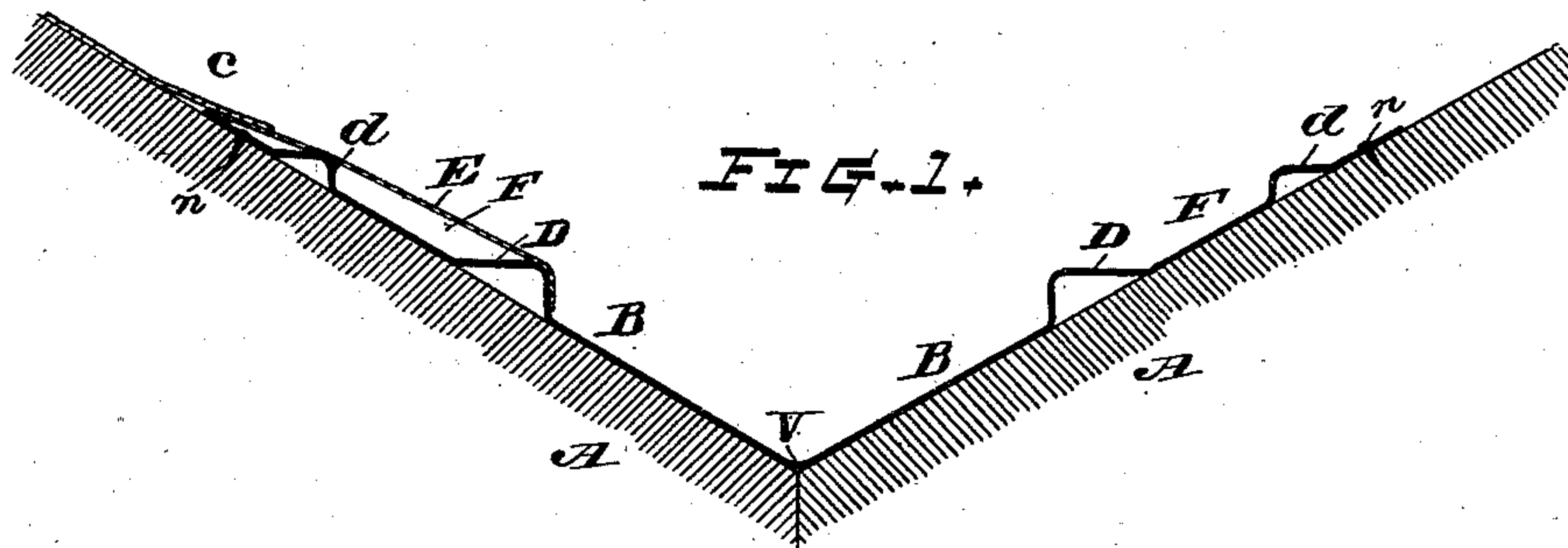


FIG. 2.

WITNESSES:

Wm. H. Carson.

INVENTOR

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Attorney.

UNITED STATES PATENT OFFICE.

JOHN E. CARROLL, OF PHILADELPHIA, PENNSYLVANIA.

ROOF-VALLEY.

SPECIFICATION forming part of Letters Patent No. 373,129, dated November 15, 1887.

Application filed July 26, 1887. Serial No. 245,311. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. CARROLL, a citizen of the United States, residing at the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Roof-Valleys, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a transverse section as applied to a valley between two roofs, the protecting-shingle being on one side removed. Fig. 2 is a longitudinal section, in perspective, of the two overlapping plates detached from the roof.

This invention is an improvement in metallic roof-valley plates for covering the V-shaped gutter formed between the contiguous inclined sides of two adjacent roofs; and its object is to provide such a plate whereby the water within the same will be carried away and prevented from flowing or coming into contact with the wooden part of the roof under circumstances hereinafter mentioned.

One feature of the invention consists in providing the said plates with longitudinal ledges or bends, so as to leave a channel on the sides of the inclines of the plate, above the bottom or apex thereof, said channel being covered or adapted to be covered by the usual metallic or wooden shingles, thereby leaving a protected passage-way for the overflow-water from rain or melted snow and ice, which may back up into the channel when the central main channel or gutter is filled up with ice, snow, or other obstruction.

Another feature of the invention consists in providing the overlapped ends of the successive plates with transverse corrugations, thereby leaving a comparatively great space between the overlapping ends of the lower and upper superposed plates, in order to avoid the capillary attraction which, when the plates are smooth and even, and therefore close-lying, sometimes causes the water to find its way up between the plates to the boards to which they are nailed, and thus rendering the wood liable to decay.

Referring to the drawings, A A, Fig. 1, are two roofs whose contiguity forms a V-shaped valley, V, along which are secured the continuous lines of metallic plates B, conforming

to the shape of that part of the roof, and secured to the roof-boards by means of the usual nails, *n*. These plates are usually plane, and the wooden (slate or metal) shingles *c* extend over the sides or edges, and when ice forms within the gutter it frequently occurs that water forces its way beneath the overlapping shingles to the wood beneath, thereby injuring the latter and causing it to rot. In order to obviate this defect, I form the valley-plates as shown—that is to say, I provide along the sides of the plates two parallel longitudinal bends or ribs, D *d*, as shown, which form, when the shingles E are put on, continuous channels F on each side of the apex of the valley. Now, if the latter fills up with ice, the water will find its way beneath the shingles E into the channels F, (which are protected from the snow and ice by the shingles,) and thence run off to the roof or to the conducting-spout. The upper ridge, *d*, forms a breastwork against the rush or passage of the water to the upper edges of the plates—that is to say, when it would come into contact with the boarding.

When metal shingles are employed, instead of allowing the lower ends thereof to project over the ribs D, I now prefer to turn the same down against the side of the lower ridge, D, as shown in the drawings. The plates are made in sections and the adjacent ends of the several sections fit one upon the other, as seen in Fig. 2.

I am aware of the fact that roof-valley plates having a single ledge on each side somewhat similar to ledges D have been known.

In order to prevent water being absorbed by capillary action between the seams or joints of these overlapping plates, and thus drawing the water up to the wood-work beneath, I provide the upper end of each section with transverse corrugations, G, and extend the upper or plane end over the same, preferably bending down its front edge, as shown in Fig. 2. Thus air-spaces are left between the plates, which, so to say, serve to break up the capillary attraction.

Having thus described my invention, I claim as new and wish to secure by Letters Patent—

1. As a new article of manufacture, a roof-valley plate provided with two longitudinal continuous ribs or ridges, as D *d*, forming an

intermediate channel, substantially as and for the purpose set forth.

2. The combination of the roof, the series of valley-plates provided with the two longitudinal continuous ridges and intermediate channels, and the shingles covering said channels, substantially as and for the purpose set forth.

3. A roof-valley consisting of a series of superposed plates, of which the ends of the under plates are transversely corrugated and the

overlapping part of the upper plates a plane surface, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature this 25th day of July, A. D. 1887. 15

JOHN E. CARROLL.

Witnesses:

JNO. NOLAN,
ANDREW ZANE, Jr.