2 Sheets—Sheet 1.

C. A. VAILE.

CORNICE GUTTERS.

No. 183,519. Patented Oct. 24, 1876.

Fig. 1

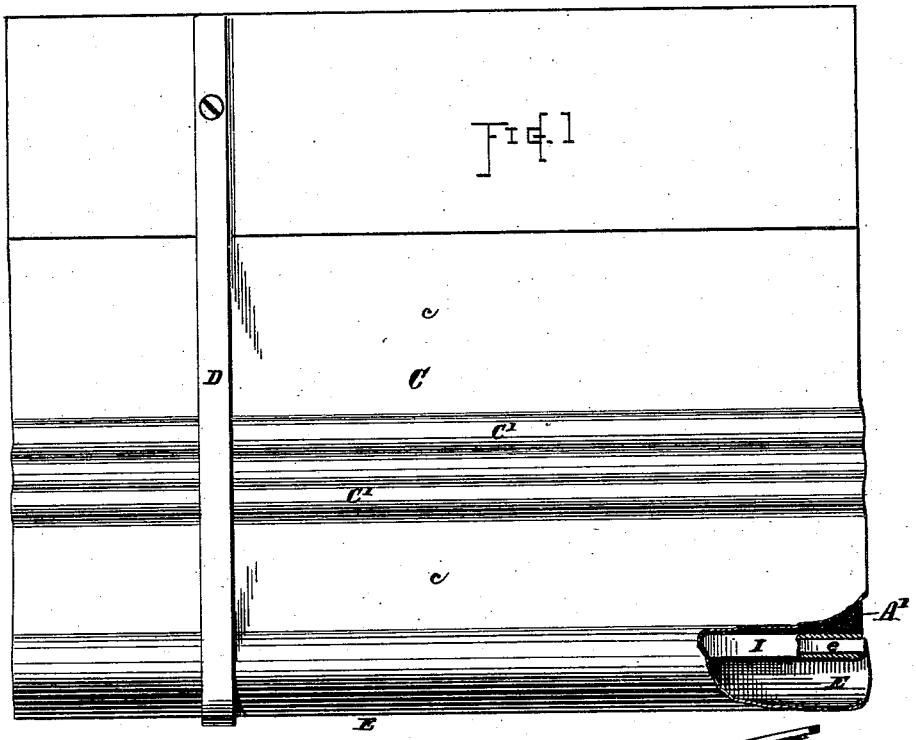

Fig. 2

Witnesses
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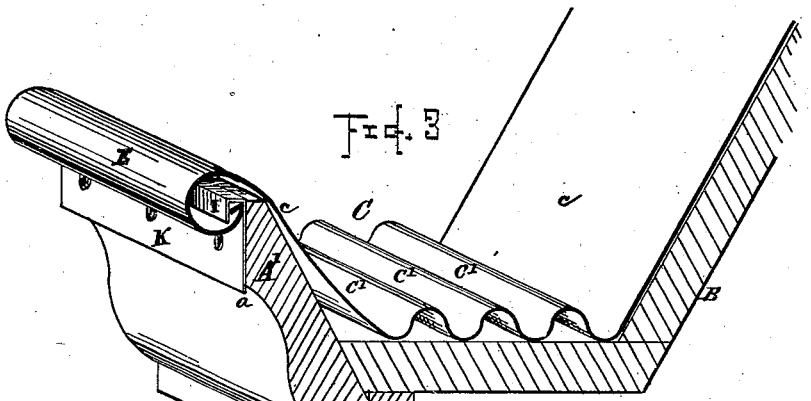
2 Sheets—Sheet 2.

C. A. VAILE.

CORNICE GUTTERS.

No. 183,519. Patented Oct. 24, 1876.

Fig. 3



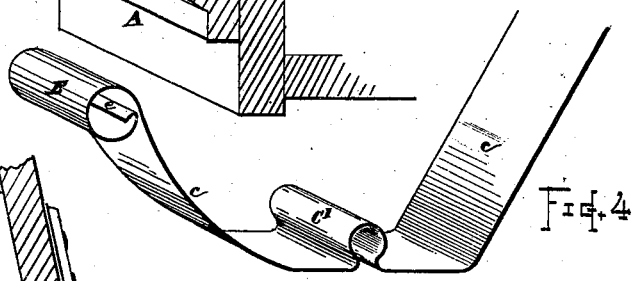
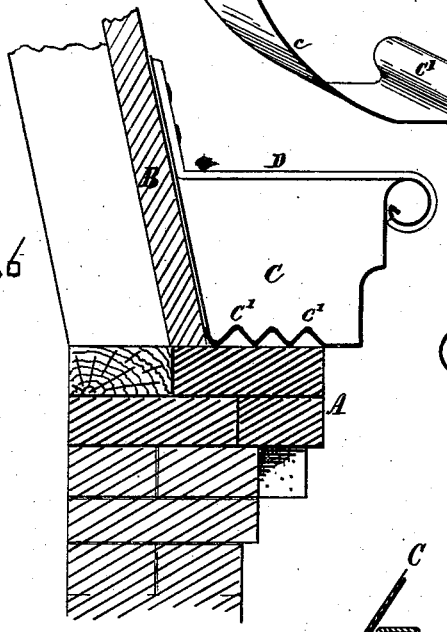


Fig. 4.

Fig. 6



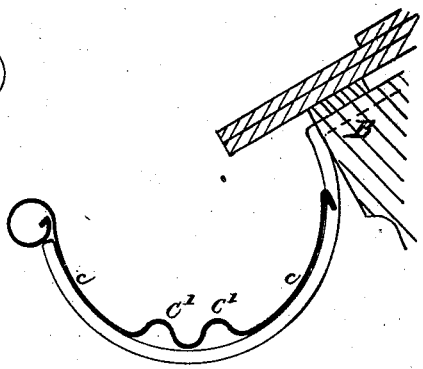


Fig. 7

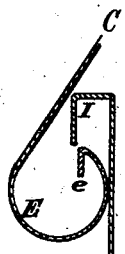


Fig. 5

Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES A. VAILE, OF WORCESTER, MASSACHUSETTS, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOSEPH MARCUS RICE, OF SAME PLACE.

IMPROVEMENT IN CORNICE-GUTTERS.

Specification forming part of Letters Patent No. **183,519**, dated October 24, 1876; application filed February 28, 1876.

To all whom it may concern:

Be it known that I, CHARLES A. VAILE, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Cornice-Gutters; 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, which form a part of this specification, and in which—

Figure 1 represents a plan view of a cornice-gutter embracing my invention as applied to a metal cornice. Fig. 2 represents a transverse section of the same. Fig. 3 represents a section of my improved gutter as applied to a wood cornice. Fig. 4 represents a modification in the construction of the gutter. Fig. 5 illustrates the manner of locking the improved connecting-joint at the front or crown of the cornice. Fig. 6 represents my improved gutter modified to serve as a wall-gutter, and Fig. 7 represents my improvement modified to serve as a hanging gutter.

The nature of my invention consists, first, in a gutter or water-lining for the cornices or copings of buildings, constructed of sheet metal, and provided, as herein described, with corrugations or rolls, formed longitudinally along the bed or bottom part of the gutter, for the purpose hereinafter set forth; second, in the peculiar method of locking or connecting the front edge of the gutter to the crown of the cornice, substantially as shown and described.

In the drawing, A denotes the cornice-moldings; B, the boarding of the roof; C, the gutter or water-lining; and D the braces or supporting-irons.

The general shape and size of the several parts are, of course, governed by the particular building whereon used, and may be varied to suit the conditions of the several kinds of roofs and different materials used in the construction and finish of the cornices.

The cornice shown in Figs. 1 and 2 is made with sheet-metal finish; that shown in Fig. 3 with wood finish.

My improved gutter C I form with the sides or inclined portions *c c* plain and smooth, while along the bed or bottom thereof I form corrugations or rolls C′, extending longitudinally throughout the entire length of the gutter, from one to three rolls or corrugations being employed, according to the size and shape of cornice. In some instances more than three rolls may be desirable; but one or two rolls are generally sufficient for ordinary buildings. The shape of the rolls or corrugations may be varied, as in Figs. 3, 4, and 6. The forward or outer edge of the gutter C I form into a roll, E, having an inward-turned flange or lip, *e*, and the crown A′ of the cornice I provide with an angular flange, I, standing outward and downward, as shown, the extent of said flange outward before turning down being slightly greater than the width of the lip *e* of the gutter-roll E.

When the crown A′ is of wood the flange I is formed on a strip of metal, K, and nailed to the face of the crown A′, as shown in Fig. 3. The lower edge of said strip K may extend below the corner of the wood and form a drip, *a*, if desired.

When the work is put together, the roll E is hooked under the flange I by raising the rear side of the gutter, as indicated in Fig. 5. Then, when the gutter is lowered into position, the lip *e* stands against the flange I, and the roll E and flange I form an elastic lock-joint or connection between the gutter and cornice-crown, which retains the gutter securely in position, while it permits of the free expansion or contraction of the metals independently of each other. The rear edge of the gutter may be secured beneath the slating or roof-covering, in the ordinary manner.

Among the advantages incident to my invention may be mentioned the following: The rolls or corrugations C′, being at the bottom or bed, do not interfere with the proper flow of water, the sides *c c* being smooth, and while they permit lateral expansion and contraction, they hold the metal longitudinally, and prevent its buckling and tearing in long gutters, while they strengthen the bottom and prevent its warping into elevations and depressions, thus causing intervals where water will stand in the gutters. The lock-joint at the front edge obviates the necessity of soldering in case of metal, or nailing in case of wood, cornices, and

produces a connection that will not tear out or split the moldings at the crown, while the cost of manufacturing and putting up my improved gutter is but slightly in excess of the cost of ordinary plain gutters, and is much less, if the greater efficiency and durability of my improved gutter are considered.

Having described my improvements in cornice-gutters, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. A sheet-metal gutter, C, provided with one or more longitudinal rolls or corrugations, C′, along its bed, substantially as and for the purpose set forth.

2. The improved method, substantially as described, of securing the front edge of the gutter to the cornice-crown by the roll E *e* and angular flange I, for the purpose set forth.

CHARLES A. VAILE.

Witnesses:

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