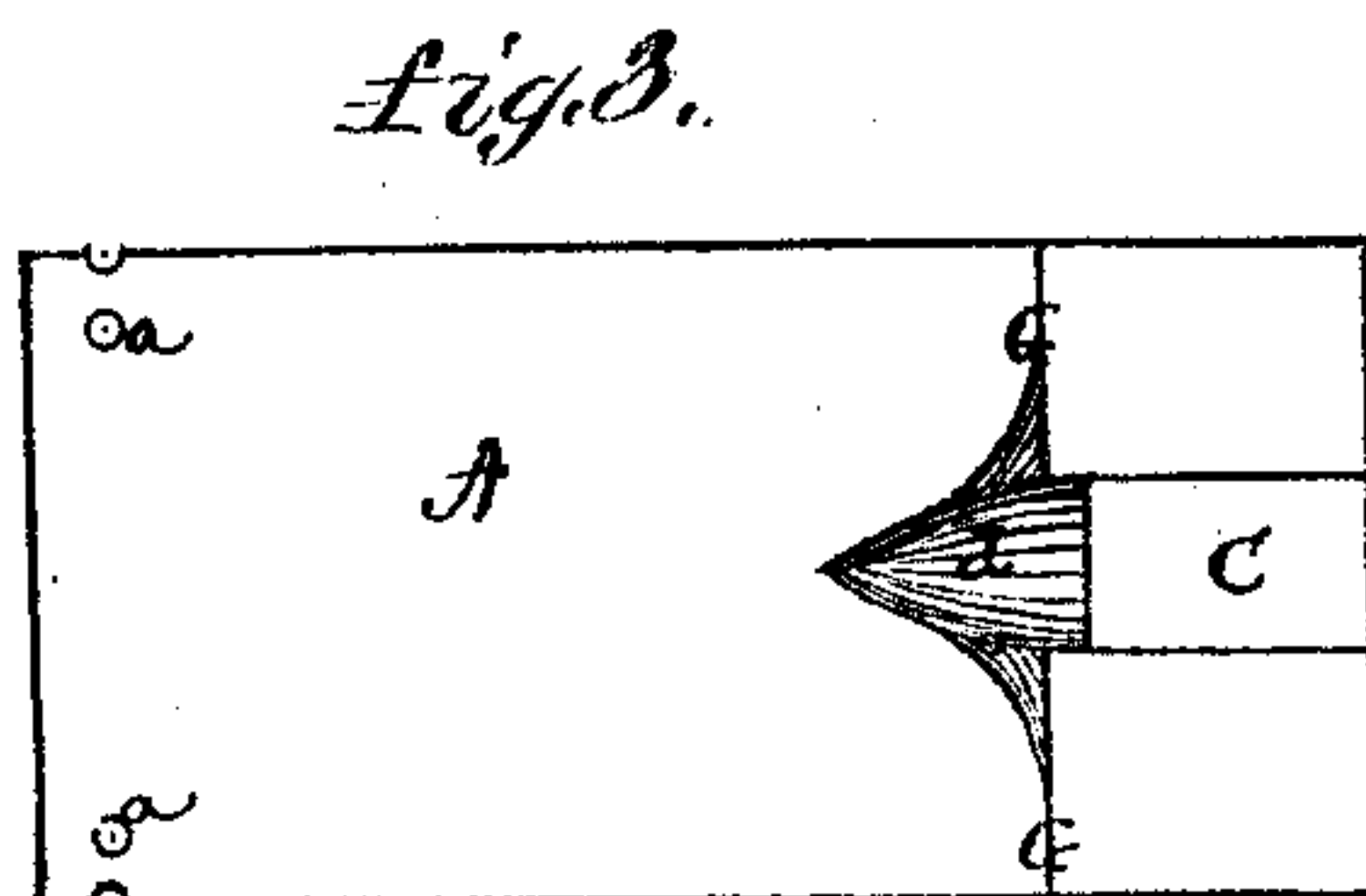
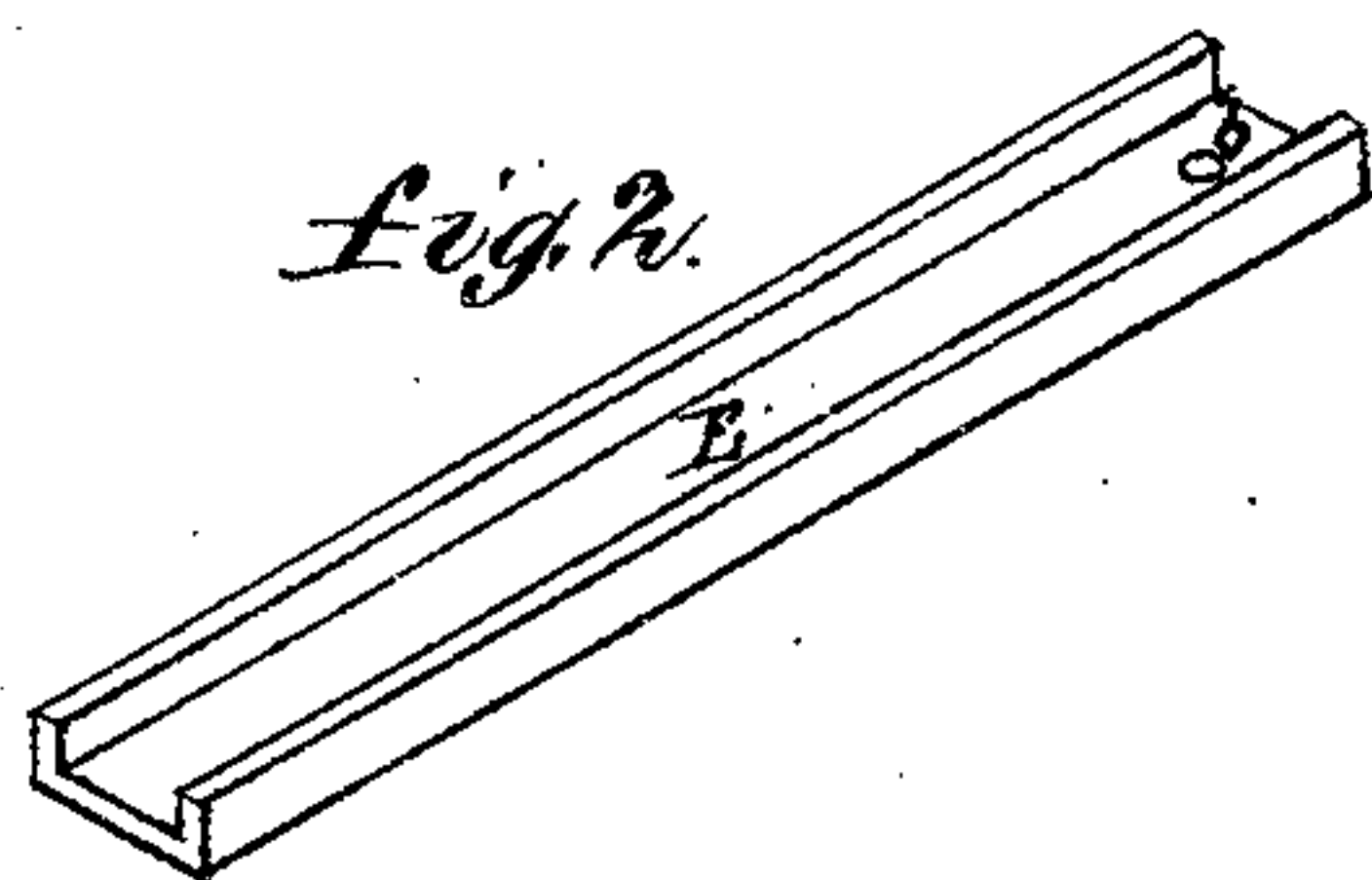
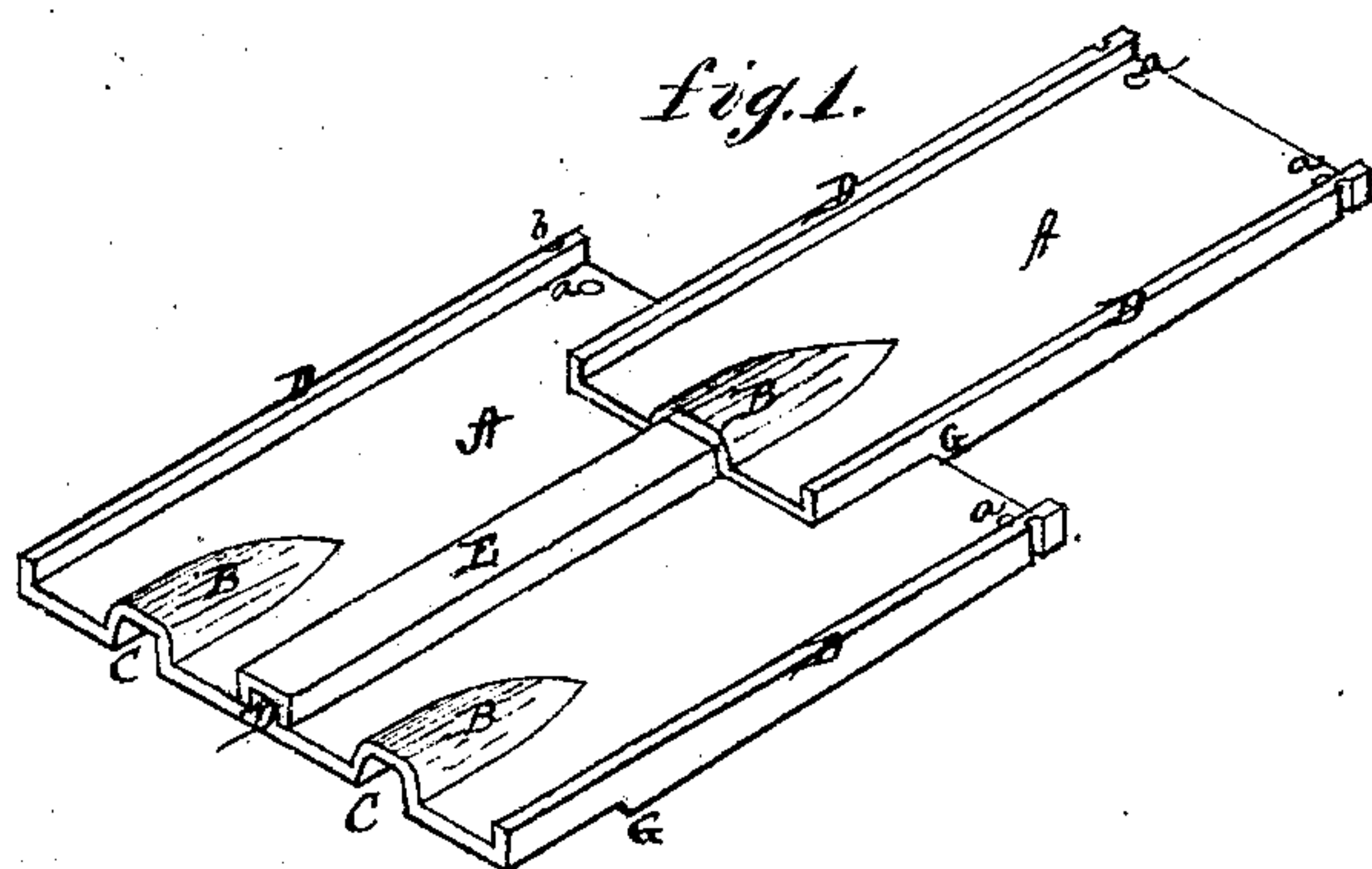


John B. Hughes Tile for Roofing.

No. 121,624.

Patented Dec. 5, 1871.



Witnesses
John A. Ellis.
J. V. White.

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UNITED STATES PATENT OFFICE.

JOHN B. HUGHES, OF TERRE HAUTE, INDIANA.

IMPROVEMENT IN TILES FOR ROOFING.

Specification forming part of Letters Patent No. 121,624, dated December 5, 1871.

To all whom it may concern:

Be it known that I, JOHN B. HUGHES, of Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Tile for Roofing; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a peculiarly-formed tile for purposes of roofing and weather-siding, and in the mode of fastening the same, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view, showing several tiles put together. Fig. 2 is a perspective view of the cap, and Fig. 3 is a view of the under side of the tile.

A A represent tiles attached to the horizontal ribs or joists of a roof or wall by means of nails passing through holes *a a*, near the upper edges of the tiles. At the sides of the tiles A A are upturned edges or ribs D D, and in the center at the lower edge a raised part, B, the latter to allow of a groove, C, being formed beneath the tile to receive the upper end of the cap E, the said caps being used to break the joints between the tiles. The under side of the tile is shouldered at G, and its lower surface so raised from the said shoulder to its lower edge as to admit of the upper edge of the preceding course of tiles resting beneath it upon the ribs or joists. The upturned rib D is formed of exactly the same width the entire length, and on the under side of the cap E is a longitudinal groove the sides of which are parallel, and said groove is of such form and size as to fit over the contiguous edges D D of two tiles. The cap is then secured by a nail through its upper end at *b*. The upper end of the raised part B, on the under side, in the cen-

ter of the shoulder G, is hollowed out at *d* so as to reduce the thickness of the tile at this point, facilitating the manufacture of the tiles.

I am aware of the patent granted to George Cook, November 12, 1867, but my tile differs from his in several essential particulars. In Cook's case the upturned edges or ribs are made tapering and the groove in the cap of corresponding shape, so that the cap would have to be slid on from the top, and hence when one single tile was broken or needed repair it would become necessary to remove a great number of tiles and break one or more caps. This is entirely obviated by my improvement, because it is only necessary to raise the lower edge of my tile a short distance to remove the cap of the tiles below. Then the holes *a* and *b* in the tile and cap are made of such size that they can readily be lifted off without breaking or removing the nails. The straight edges are also much more easily manufactured by machinery than the tapering. Another advantage is also the hollowing out on the under side at *d*. In Cook's case, the shoulder G ran entirely across the tile, making the tile at the upper end of the groove C much thicker than the rest, which caused it to crack and break in drying; but by my improvement the thickness is nearly uniform, and hence no accidents occur in drying. This uniformity of thickness is obtained by extending the hood to a point above the shoulder with corresponding hollowing out underneath.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The plate A, formed with the upturned edges D D, raised part B, of the form shown, hollowed out at *d*, in combination with cap E constructed with parallel sides, all arranged to form a roofing-tile, as described.

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

Witnesses:

JOHN B. HUGHES.

T. H. ALEXANDER,
J. V. WHITE.

(126)