

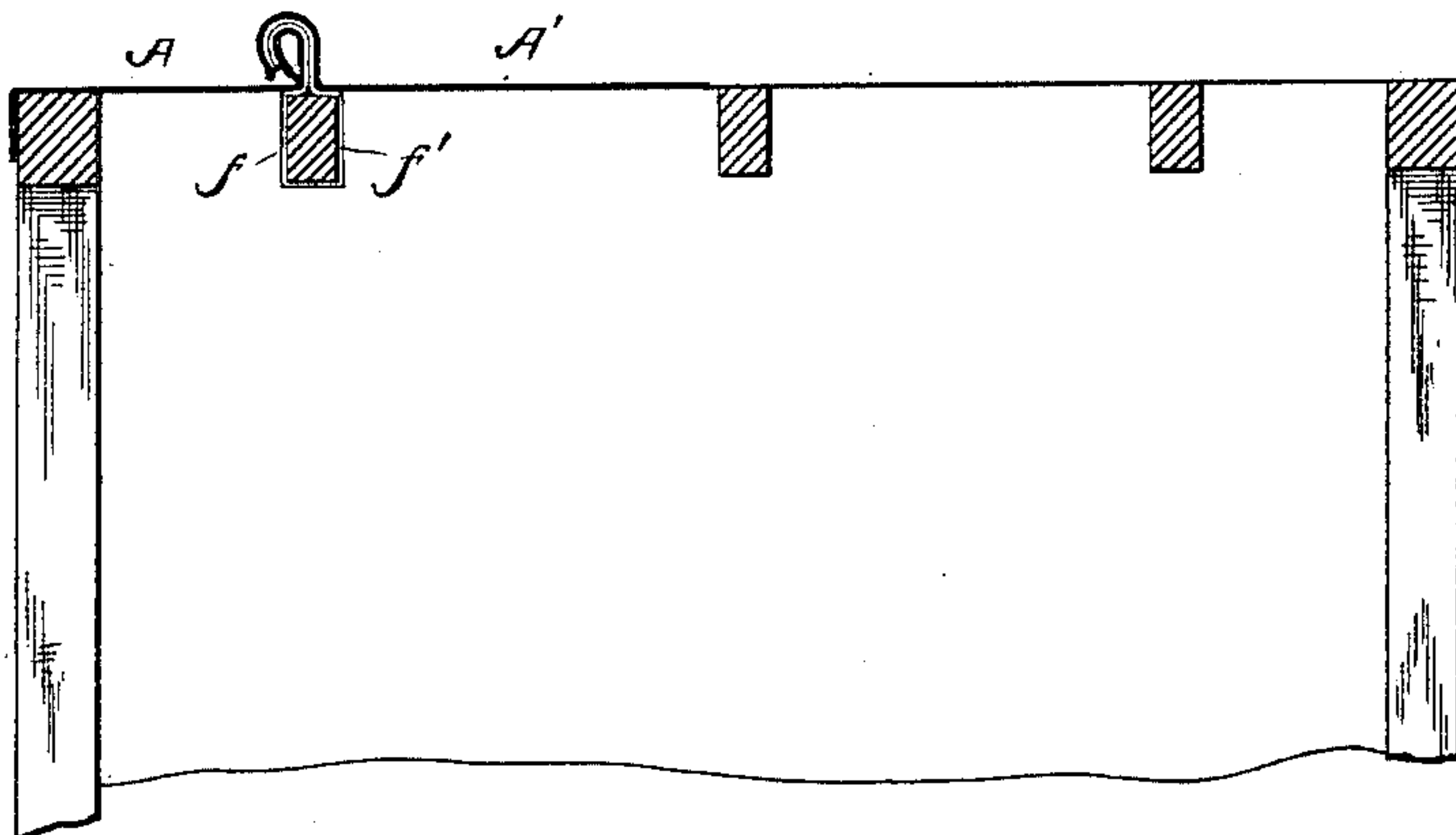
(No Model.)

F. A. GUTHRIE.  
METALLIC ROOFING.

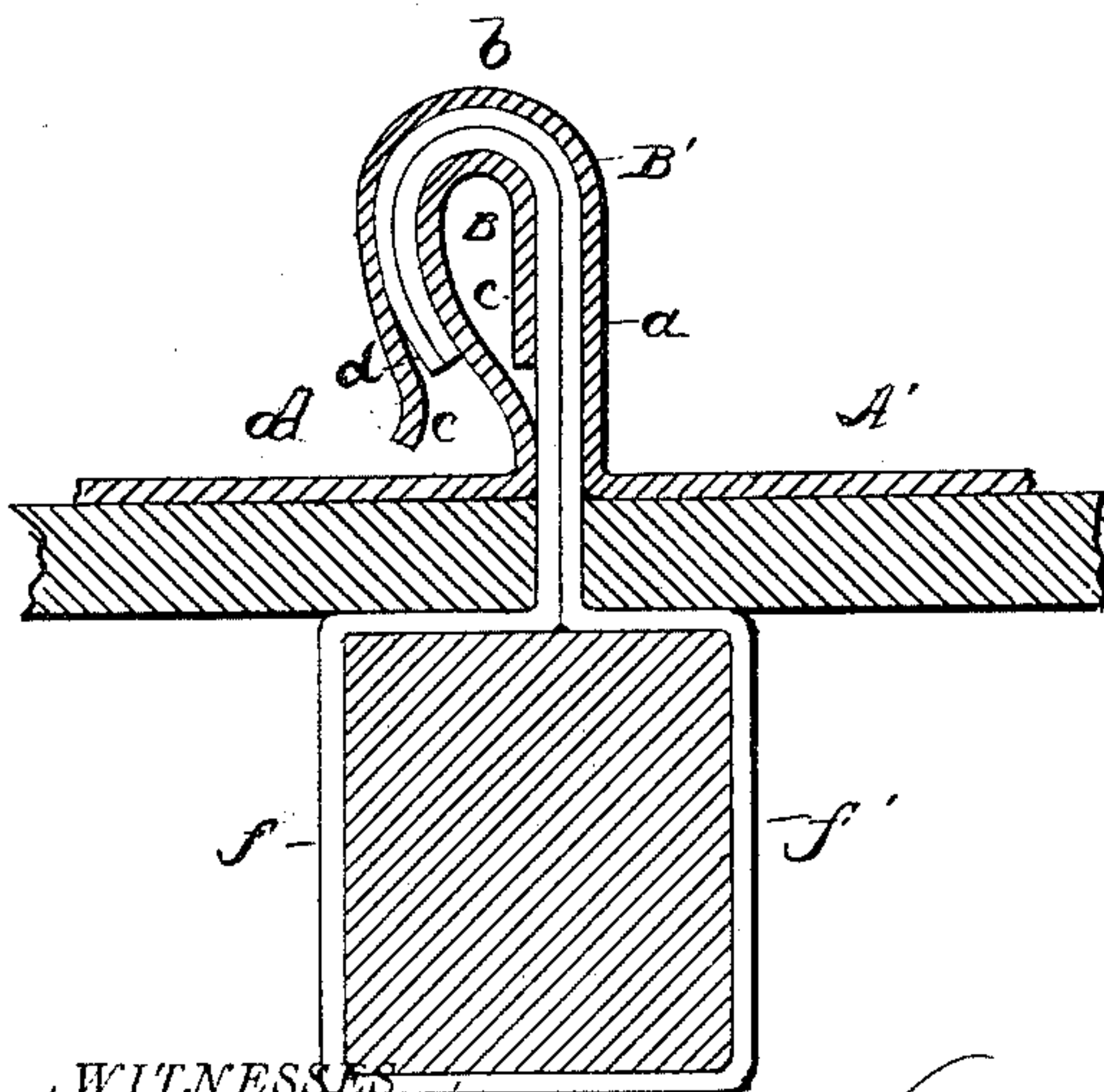
No. 324,994.

Patented Aug. 25, 1885.

*Fig. 1.*



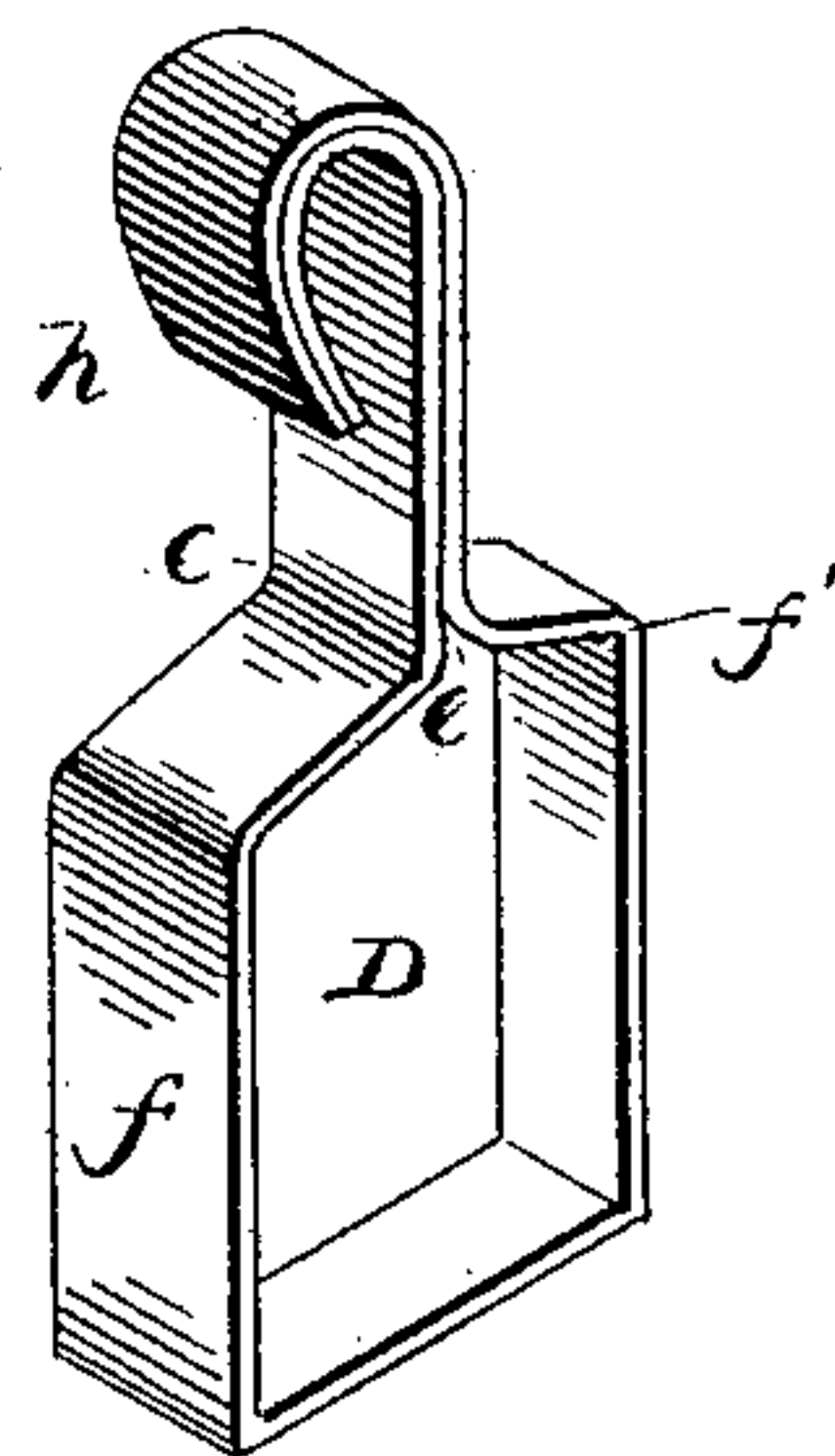
*Fig. 2.*



WITNESSES

*W. H. Mortimer.*  
*E. G. Siggers.*

*Fig. 3.*



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INVENTOR

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# UNITED STATES PATENT OFFICE.

FRANK AUGUSTUS GUTHRIE, OF GALLIPOLIS, OHIO.

## METALLIC ROOFING.

SPECIFICATION forming part of Letters Patent No. 324,994, dated August 25, 1885.

Application filed October 11, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK A. GUTHRIE, a citizen of the United States, residing at Gallipolis, in the county of Gallia and State of Ohio, have invented a new and useful Improvement in Metallic Roofing, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to metallic roofing; and it has for its object to provide simple, convenient, and efficient means for attaching the flanged or capped roofing plates or sheets to the building, so as to be held firmly in position, and there will be no possibility of displacement.

With these ends in view the said invention consists in certain details of construction and combination of parts, as hereinafter set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a cross-sectional elevation of a building having my improved metallic roofing applied thereto. Fig. 2 is an enlarged sectional elevation showing more clearly the attachment of the roofing. Fig. 3 is a detail view of the strap or anchor.

Like letters are used to indicate corresponding parts in the several figures.

Referring to the drawings, A A' designate two plates or sheets of the metallic roofing, provided at their meeting edges with caps B B', the upper cap, B', fitting over or overlapping the under cap, B. As shown, said caps comprise a vertical upturned flange, *a*, at the upper end of which is a curved bend, *b*, a rim, *c*, depending from the bend. The bend *b* of the under cap, B, is about one-eighth of an inch, and has the rim *c*, inclining inward toward the flange *a*, while the bend *b'* of the upper cap, B', is about three-sixteenths of an inch, and has the rim *c* bent inward near its lower end to form a bearing-edge, *d*. In this manner the rim of the under cap, B, will conform to the shape of the flange *a* of the upper cap, B', and the rim *c* of the latter will fit over the bend of the cap B, the bearing-edge *d* binding against the flange below said bend and serving to hold the two plates together. The caps B B' are formed on each plate by any suitable machine which may be adapted for this purpose. As will be seen, the peculiar construction of the cap B' provides a clamping action in applying

it to the cap B, and insures a firm hold between the several parts.

D designates the strap or anchor used to attach the roofing-plates to the rafters of the building. As seen in Fig. 4, this strap or anchor consists of a flat piece of metal bent at its center *e* to form arms *f f'*, and passed around and underneath the rafter. (See Figs. 1 and 2.) After passing around the rafter or beam the arms *f f'* extend upward and come together at their upper ends, where they are returned over and bent downward to provide a curved clamping flange or rim, *h*. In applying this anchor or strap it is passed around and underneath the rafter or beam, and then brought up, the arms coming together at the upper ends and providing the clamping rim or flange. The latter fits over the bend *c* of the under cap, B, so as to firmly hold the roofing in place.

The operation of my invention will be readily understood from the foregoing description, taken in connection with the annexed drawings. The roofing plates or sheets are bent by any suitable machine to provide the caps B B', and they are then laid on the roof, or, rather, on the rafters or beams, in the usual manner. The anchor or strap D is then passed around the rafters, and its curved clamping rim or flange *h* fitted to the bead formed by the bend of the under cap, B. When the anchor has been properly fitted in place, the upper cap, B', of the other plate is applied to the cap B, in the manner hereinbefore stated, and thus one section of the roofing is complete. In the same manner the sections may be joined together, roofing-tongs of any desired pattern being employed to fit the caps of the sheets or plates together.

It will be seen that the cap B', fitting over the cap B, presents a round, smooth surface, which insures the caps from cracks and abrasions. When the two caps have been placed together, the roofing-tongs press them firmly together, and thus provide a safe and sure attachment. The bend of the under cap, B, provides a bead, around which the outer and upper cap, B', is firmly pressed, the bearing-edge *d* of the latter fitting against the flange *a* below the bead or bend, so as to hold the two together, preventing the under cap from dropping down or the upper cap from rising up.



It will be observed that the anchor or strap will firmly hold the roofing-plates down in position to the rafters, so as to resist the effects of heavy winds. The roofing is simple and durable in construction, convenient to fit together, and efficient in use. The parts are readily attached in position, and will not work out of order. The joints will be even and strong, while the caps will not become cracked, as the upper cap will present a round, smooth surface, which insures them from abrasion. The parts will mutually support each other, the anchor or strap holding the sheets or plates down, while the two caps fitted together will resist lateral or downward strain.

Having described my invention, I claim—

1. The plate or sheet A, having a cap, B, along its edges, and the plate or sheet A', provided with a similar cap, B', in combination with an anchor or strap having its arms connecting with the rafters or beams, and coming together at their upper ends, where they are formed with a clamping rim or flange, h, the latter fitting over the cap B, the cap B' being

sufficiently large to enable it to spring over the clamping-rim, so as to inclose the cap B, as set forth.

2. The combination, with the metallic roofing consisting of plates or sheets provided with caps at their meeting edges, of the herein-described anchor or strap, arranged to be passed around and underneath the rafters and fitted to the caps, as set forth.

3. The combination, with the roofing plates or sheets, formed with caps at their meeting edges, of the herein-described anchor or strap, passing around and underneath the rafter, and having its arms extending upward and coming together at their upper ends, where they are formed with a rim or flange to fit over the under cap, as set forth.

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

FRANK AUGUSTUS GUTHRIE.

Witnesses:

A. F. MOORE,  
ANNA L. MOORE.