(No Model.)

T. F. & J. FITZBERGER.

METALLIC ROOFING.

No. 277,254. Patented May 8, 1883.

Fig. 1.

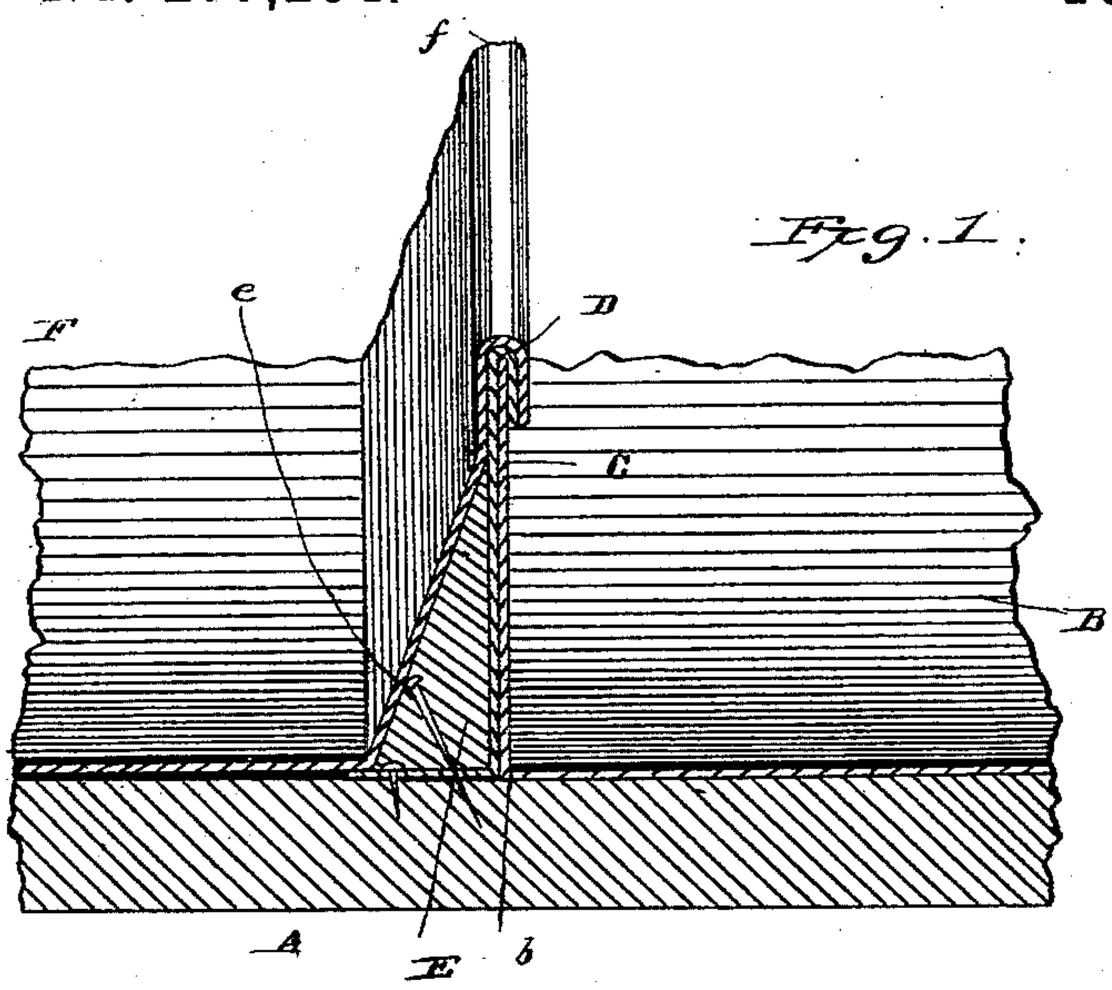


Fig. 4

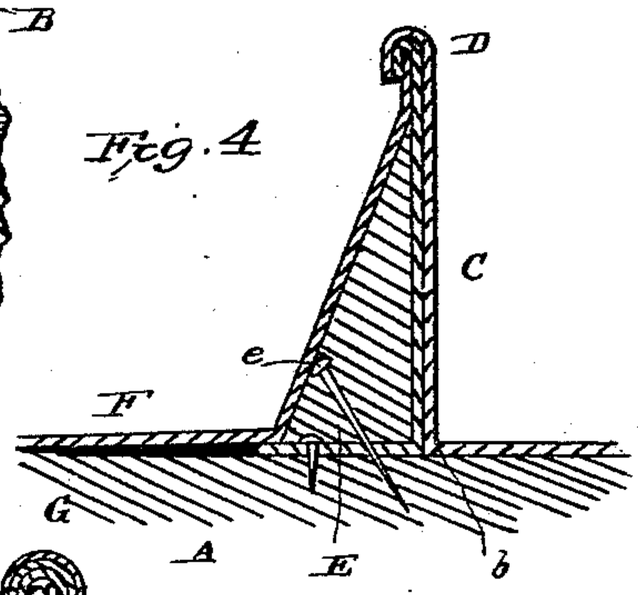


Fig. 2.

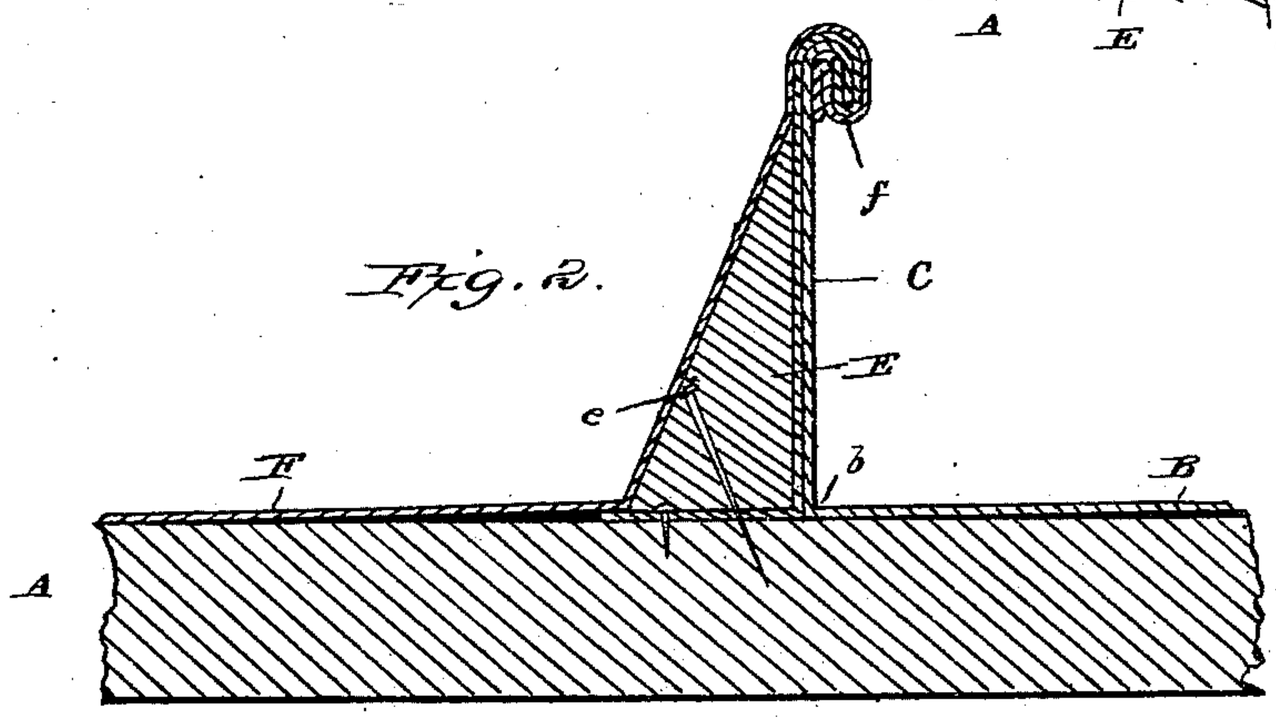
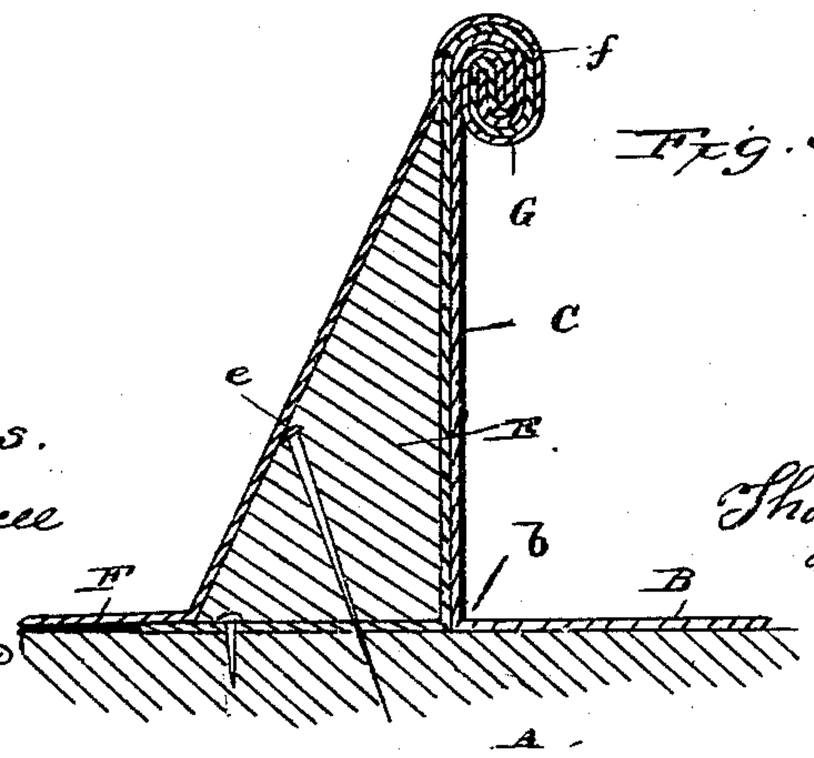


Fig. 3.



Witnesses.
Edwin L. Yewell
H. A. Faulmin

Inventors
Thomas F. Fitzberger
and John Fitzberger
C. M. Alexander
Attorney

UNITED STATES PATENT OFFICE.

THOMAS F. FITZBERGER AND JOHN FITZBERGER, OF BALTIMORE, MD.

METALLIC ROOFING.

SPECIFICATION forming part of Letters Patent No. 277,254, dated May 8, 1883.

Application filed February 15, 1883. (No model.)

To all whom it may concern:

Be it known that we, THOMAS F. FITZBERGER and JOHN FITZBERGER, citizens of the United States, residing at Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Metallic Roofing, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in metallic roofs for buildings; and it has for its object to provide a roof which shall be strong and not liable to be blown off during storms or high winds, and which will also be perfectly tight or water-proof; and it consists in the employment of metallic sheets, either of iron or of tin, in connection with strips or battens, the peculiarities of which will be hereinafter more fully pointed out.

In the accompanying drawings, making a part of this specification, and on which like reference-letters indicate corresponding features, Figure 1 represents a view of our improved roof, partly in plan elevation and partly in vertical section, showing the seam partly formed. Fig. 2 represents a view of the same in vertical section, showing the manner of folding the seam when the invention is applied to a steep roof; Fig. 3, a view similar to Fig. 2, showing the kind of seam to be used on a "flat" roof; and Fig. 4, another vertical sectional view, showing a modified manner of folding the seam.

The letter A indicates the sheathing of a roof, the same being of wood, as usual, and the letter B a portion of one course of tin or other metallic roofing material, the same being provided with a right-angled bend at the point *b*, forming an upwardly-extending portion, C. The letter D designates a cleat formed of a narrow strip of metal provided with a bend near its upper end, forming a hook, which is adapted to fit over and down upon the upper edge of the extension C, the lower end of said cleat being provided with a right-angled bend, and the portion extending from such bend being secured by means of nails or otherwise to the sheathing of the roof, as indicated. These cleats are placed at suitable intervals along the line of the seam from the apex to the eaves of the building. Their object is to secure the course C firmly and strongly down to and upon the sheathing, the extension C of which, being in a vertical position and lying in close contact with the cleat, admits of a suitable downward strain without danger of bending or distorting the said extension.

The letter E refers to a batten formed of a strip of wood triangular in cross-section, one of its sides being in a vertical plane. This batten or strip is placed with its vertical side against the vertical part of the cleat D, and with its bottom upon the horizontal portion of said cleat, a nail or screw, *e*, being employed, as indicated in the drawings, for the purpose of holding said batten in this position. The course F is then next applied to the sheathing, and is provided with a bend beginning at the bottom of the inclined side of the batten E, whence it extends upward to the apex of the said batten, where it is bent into a vertical line, carried upward, and adapted to be folded over the edge of the extension C and the cleats D, as will presently appear.

It will be observed from the drawings that the courses extend up above the upper edge of the batten, the object of this being to give sufficient metal to form the seam.

In Fig. 2 the seam is shown as used in constructing steep roofs, the same being known as the "double" seam. It is formed by giving the partial seam, as seen in Fig. 1, a half-turn, bringing the upper edge, *f*, to an inverted position, thereby completely locking the parts together.

The seam as shown in Fig. 3 is known as the "thribble" seam, and it is formed by giving that indicated in Fig. 2 a half-turn, as above described, whereby the upper edge, G, is inverted, the result being to completely bind the edges of the adjoining courses together.

The object of employing the thribble seam on a flat roof is to prevent the water which accumulates between the seams of each course, and which rises high enough to reach the folds of the metal, from oozing between them and causing the house to leak.

In Fig. 4 the cleat D is shown bent over the upper edge of the course F, instead of being first bent over the course C, as above described, and this last-mentioned course is turned or bent over the cleat and the upper edge of the course F. To complete the seam thus partially formed, the metal is given a partial turn (in

the manner above described) down upon the inclined surface of the course F.

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

1. In a metallic roof, the combination of the course having a vertical extension and the binding-cleats with a batten having a vertical side, and the adjacent course bent to fit and bear upon the same, and adapted to be folded in the manner as shown and described.

2. In a metallic roof, the combination of the course having a vertical extension with the batten having a vertical side, the interposed cleat, the course bent to fit the batten, and the sheathing, said cleats being hooked over the extension and bent to fit said sheathing, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS F. FITZBERGER.
JOHN FITZBERGER.

Witnesses:
CHAS. D. DAVIS,
H. A. TOULMIN.