

No. 648,343.

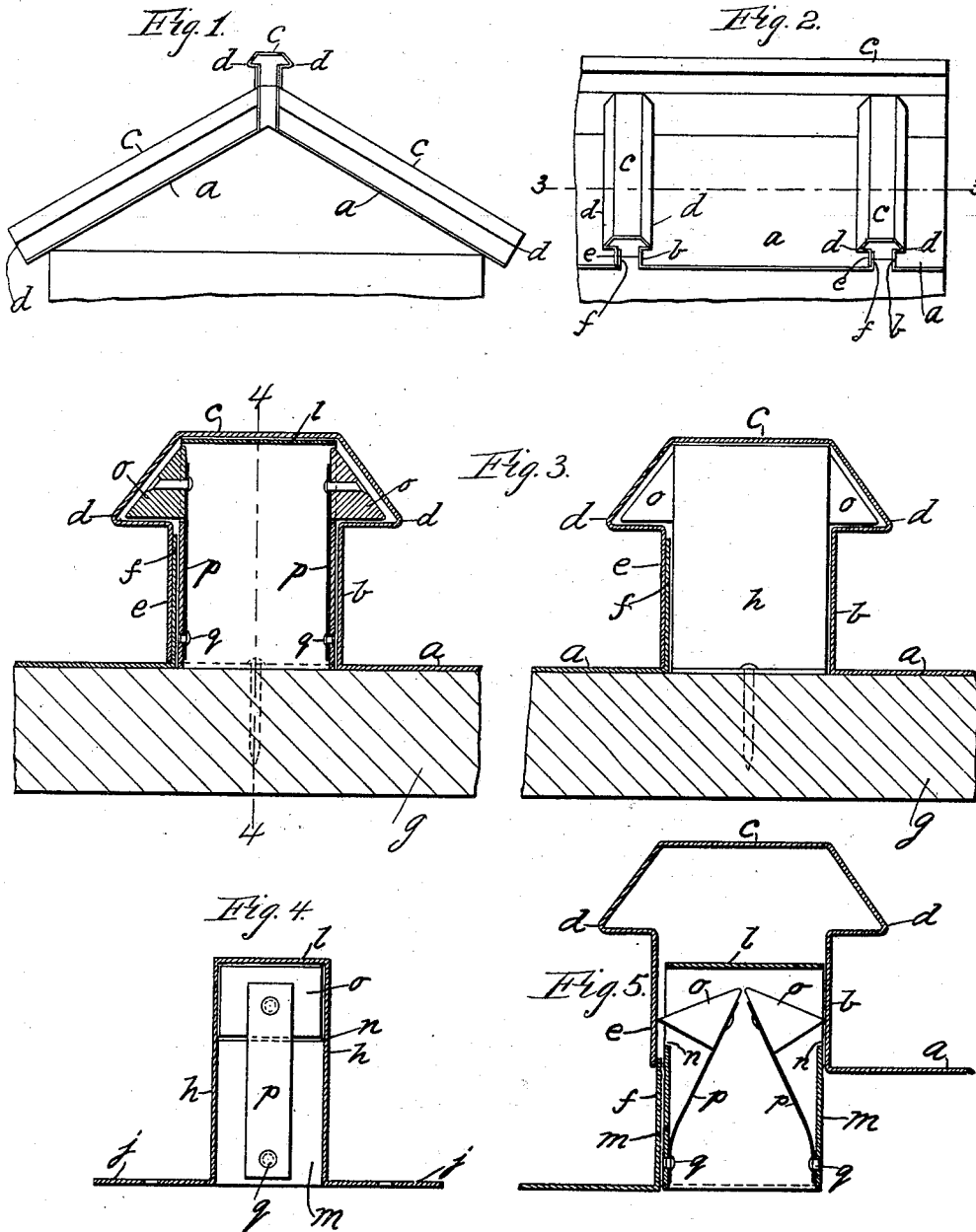
Patented Apr. 24, 1900.

T. P. FLANAGAN.

ROOFING.

(Application filed Feb. 14, 1900.)

(No Model.)



WITNESSES

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# UNITED STATES PATENT OFFICE.

THOMAS P. FLANAGAN, OF NEW YORK, N. Y.

## ROOFING.

SPECIFICATION forming part of Letters Patent No. 648,343, dated April 24, 1900.

Application filed February 14, 1900. Serial No. 5,139. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS P. FLANAGAN, a citizen of the United States of America, and a resident of the borough of Brooklyn, New York city, and State of New York, have invented certain new and useful Improvements in Roofing, of which the following is a specification.

My invention relates to improvements in standing lock-joints in sheet-metal roof-covering contrived for securing the sheets without nailing; and it consists of improvements in the construction of the locks for securing the sheets, whereby the wood strips heretofore used for securing the sheets to the roof-boards are not required, the manner of applying the sheets is simplified, and an economy in cost is attained, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is an end elevation of a roof on which the covering-sheets are secured in accordance with my invention. Fig. 2 is a side elevation of part of such a roof. Fig. 3 is a detail in section on line 3 3, Fig. 2; enlarged. Fig. 4 is a detail in section on line 4 4, Fig. 3. Fig. 5 is a detail showing the manner of applying the covering-sheets and securing them in position.

The covering-strips *a* have a hollow rib produced along one margin, comprising the upturned web *b*, cover *c*, two laterally-offset dovetail ribs *d*, and the pendent flange *e*, and also have the upturned flange *f* along the other margin, and locking-posts are provided for attaching to the roof-boards *g* at intervals along the range of the said ribs up and down the roof-boards, also for attaching to the ridge-piece for securing a like hollow rib thereto, said locking-posts comprising a hollow structure, preferably constructed of sheet metal, whereof two upright sides *h*, having base-flanges *j* for attachment to the roof-boards and a top part *l* and being as wide as the distance between upright web *b* and flange *e* of the ribs, are joined and soldered at their

edges to two other shorter sides *m*, respectively, between the upper ends of which and the top *l* are open spaces *n*, through which the bevel hook-heads *o* of springs *p*, riveted at *q* to the lower ends and insides of side *m* of the posts, project to hook into the dovetail offsets *d* of the ribs when said ribs are pressed down over the posts, as indicated in Fig. 5, to secure the ribs, said hooks being forced back by parts *b* and *e* of the ribs. This avoids the necessity of sliding the sheets upward along securing devices having fixed hook elements, as now practiced and which is very difficult. These locking-posts may be formed of sheet-metal parts cut in suitable parts and shaped and secured together as indicated in the drawings, or they may be cast or struck up in dies, as preferred.

The ribs of the covering-sheets will be produced in any of the well-known ways of bending and shaping the margins of metal sheets.

While the hollow form of post herein represented may be preferable, it is obvious that other equivalent forms of posts merely recessed, for instance, to receive the hook-heads *o*, but otherwise not necessarily described as hollow, may be used, and I do not limit myself to the specific form shown.

What I claim as my invention is—

The combination with the roof-boards and the metal covering-sheets having a hollow rib along one margin, which is laterally offset in dovetail form in the upper part of each side, of hollow or recessed securing-posts adapted to be secured to the roof-boards, and provided with spring-hooks which permit the ribs to be pressed down on the posts, and then lock them thereon by hooking into the offsets of the ribs.

Signed by me at New York, N. Y., this 8th day of February, 1900.

THOMAS P. FLANAGAN.

Witnesses:

A. P. THAYER,  
C. SEDGWICK.