No. 3,560, PATENTED APR. 25, 1844.

P. NAYLOR.

METALLIC ROOFING.

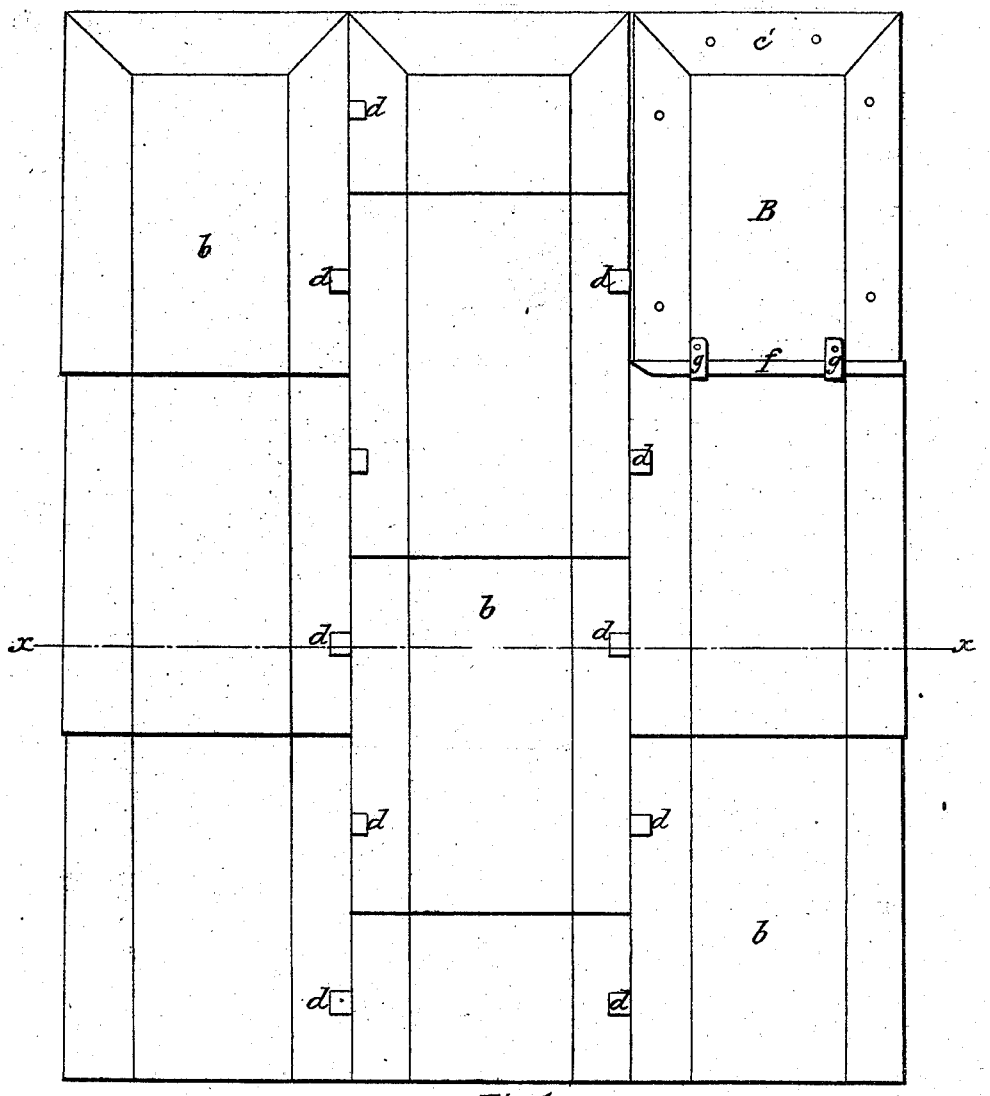

Fig.1.

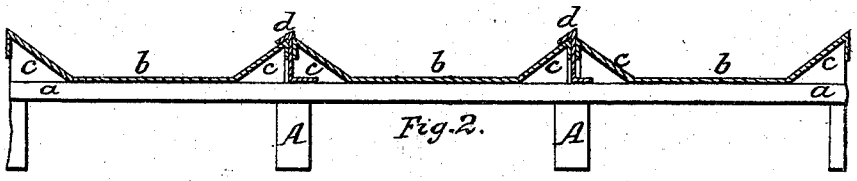

Fig.2.

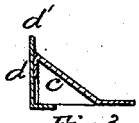

Fig.3.

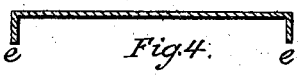

Fig.4.

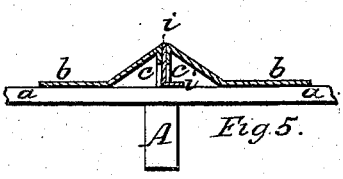

Fig.5.

UNITED STATES PATENT OFFICE.

PETER NAYLOR, OF NEW YORK, N. Y.

MANNER OF SECURING TIN-PLATE AND OTHER COVERINGS OF SHEET METAL ON THE ROOFS OF HOUSES AND OTHER BUILDINGS.

Specification of Letters Patent No. 3,560, dated April 25, 1844.

To all whom it may concern:

Be it known that I, PETER NAYLOR, of the city of New York, in the State of New York, have made a new and useful improvement in the manner of securing tin-plate and other coverings of sheet metal onto the roofs of houses and other buildings; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing Figure 1, is a top view of a part of a roof with the covering thereon; and Fig. 2, is a vertical section thereof in the line *x*, *x*, of Fig. 1.

In Fig. 2, A, A, may represent the rafters, and *a*, *a*, the sheeting nailed thereon, and which is to be covered with sheet tin, or other metal. Upon the sheeting *a*, *a*, at such distance as corresponds with the size of the sheets of metal, I nail pairs of cleats, or strips of wood, chamfered off as shown at *c*, *c*, *c*, so that the two shall constitute a ridge; the roof being divided by such ridges into a series of valleys *b*, *b*, extending from the eaves to its ridge. The pairs of cleats forming a ridge are to be nearly in contact with each other, but still so far apart as to admit of the pairing between them of two or three thicknesses of the sheet metal. The cleat strips may each be about two inches wide, and three-fourths of an inch thick, more or less. Under one of the cleats I nail a number of short strips of tin, or other metal, say of an inch in width; and from two to three inches long; these I bend rectangularly, and pass one end under the cleat strip, as shown in Fig. 3, where *c*, is the cleat strip, and *d*, the strip of tin; this strip at its end *d*, may project three-fourths of an inch, more or less, above the cleat; these ends are finally to be bent over on to the sheet metal as shown at *d*, *d*, Fig. 1.

The sheets of metal that are to constitute the covering are to be grooved at their ends, and are to be bent at right angles along their sides as in Fig. 4, in which *e*, *e*, shows the sides bent down say half an inch in width; these bent edges are to be passed into the joints between the cleat strips, and the plate then closed down into the valley, the cleats must, of course, be at such distance apart as to admit of this being done.

B, Fig. 1, shows a part of the roof which is not covered with a plate; *c*, *c*, are the cleats which run up and down the roof; *c'*, is a similar cleat at the ridge, which may meet another of like kind on the opposite side; *f*, is the grooved end of the plate last put on, and which is to receive the groove on the plate that is to cover B; *g*, *g*, are two clips of tin which may be bent at one end so as to hook into the groove at *f*, and at the other be nailed to the sheeting, thus confining the ends of each plate down, as their edges are confined by the strips *d*, *d*. As the plates are fitted to each other the grooves at their ends are to be closed down and soldered, or laid in paint, the ends of the strips *d*, which pass under the cleats are to be bent over the edges of the plates, and the joinings along the cleats to be soldered from end to end. By this mode of securing the metallic plates they rest firmly everywhere, either upon the sheeting, or upon the cleats, and are so confined that they may be walked upon without danger of their being injured thereby.

Instead of using the strips *d*, in the manner described, I have sometimes cut strips the whole length of a sheet, and of about an inch and a half in width, and bent them at right angles along their middles from end to end, and these I have confined by passing one edge under one of the cleats, while the other edge passed up between them, reaching nearly or quite to the upper angle thereof, as seen in Fig. 5, where *i*, is the angular piece which is confined under one of the cleats, and extends up to its top, between the edges of the sheets that form the general covering. When the right-angled side, shown at *e*, *e*, Fig. 4, of the metallic plates are forced in between the cleats, one on each side of the above mentioned strip, there will be three thicknesses of the metal along the whole joint, and on running the soldering iron along them, the whole will be firmly united together, and securely held down. The narrow strips, *d*, *d*, are, however, more easily managed, are equally secure, and should therefore be preferred.

Having thus fully described the manner in which I secure a covering of tin, plate, or other sheet metal on the roofs of buildings, what I claim therein as new and desire to secure by Letters Patent, is—

The attaching of such plates by passing their edges between the joinings of double cleats, or strips of wood, forming ridges from the eaves to the top of the roof, and soldering said plates to strips of metal confined down by said cleats, in the manner herein set forth.

PETER NAYLOR.

Witnesses:

J. INGHAM PERRY,

JOSEPH NAYLOR.