

L. E. GANNON.
Securing Roofing Slates.

No. 207,653.

Patented Sept. 3, 1878.

Fig: 1.

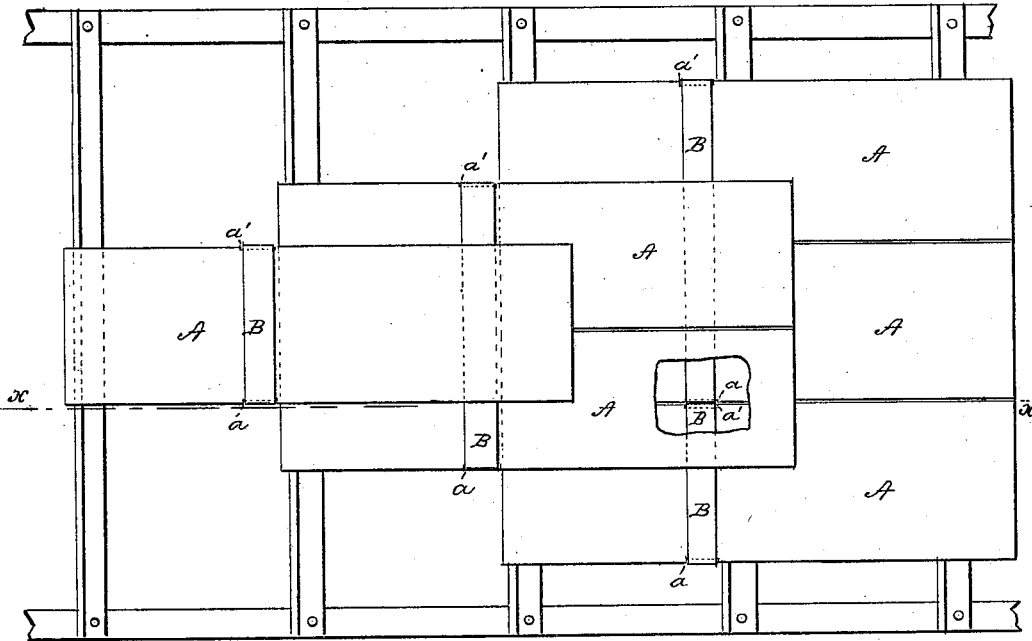


Fig: 2.

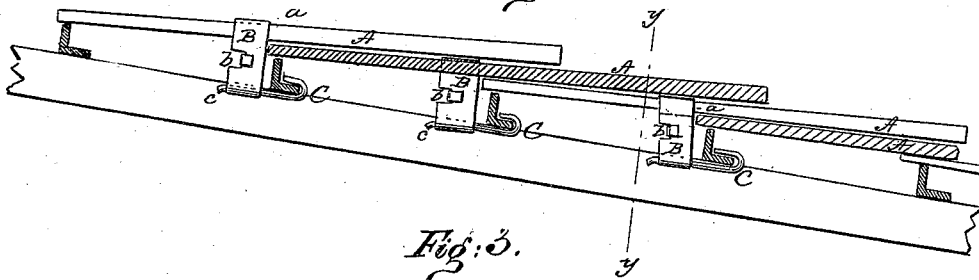


Fig: 3.

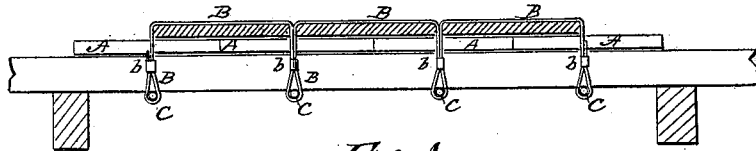
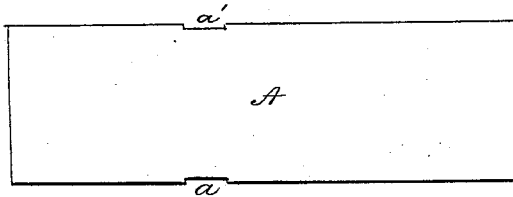


Fig: 4.



Witnesses:
Cras. Nida
H. L. Walthers

Inventor:
Lawrence E. Gannon
per G. M. [Signature]
att'y

UNITED STATES PATENT OFFICE.

LAWRENCE E. GANNON, OF WASHINGTON, D. C., ASSIGNOR TO JOHN W. HOYT AND CAROLINE M. DWIGHT, OF SPRINGFIELD, MASS.

IMPROVEMENT IN SECURING ROOFING-SLATES.

Specification forming part of Letters Patent No. 207,653, dated September 3, 1878; application filed February 11, 1878.

To all whom it may concern:

Be it known that I, LAWRENCE E. GANNON, of Washington, in the District of Columbia, have invented a new and useful Improvement in Securing Roofing-Slates; and that the following is a full clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification.

This invention is in the nature of an improvement in roofing-slates; and the invention consists in roofing slates or tiles combined with metal straps, which pass across the upper surface of the slate and unite with fastening or anchoring devices, the fastening or anchoring devices being fixed to the rafters of the roof, whereby the slates are secured in position.

In the accompanying sheet of drawings, Figure 1 is a plan or top view of a portion of a roof with slates secured according to my invention; Fig. 2, a longitudinal section of same through line *x x*, Fig. 1; Fig. 3, a cross-section taken in line *y y*, Fig. 2; and Fig. 4 a plan view of slate, showing recesses for metallic straps.

Similar letters of reference indicate like parts in the several figures.

The difficulty and expense attending the securing of slates or tiles to the roofs of fire-proof buildings is well-known, necessitating the perforation of the slate or tile, and the use, in most instances, of nuts and screws. The liability of slates secured in this way to become detached is also well known. By my invention, however, the slates and tiles may be secured to the roof, not only with great facility, but also with great firmness, and at very much less cost than the method heretofore employed for that purpose.

To accomplish this I take the slate or tile A, and in its edges I form slight recesses *a a'*. These recesses are located at a distance from one end of the slate equal to about the space between the rafters. The slates are then laid on the rafters, and a strap, B, of thin metal, of a width equal to the recesses *a a'* formed in the slates and thin enough to be pliable and

readily bent in any direction, is secured by one of its ends to a hooked fastening or anchoring device, C. This fastening is hooked to the flange of the rafter, as shown in Fig. 2, if the rafter be composed of angle-irons; or the fastening is otherwise secured to the rafter if it is not of angle-iron. The strap B, so secured, is passed upward through the recess *a* in the first slate, across the upper surface of the slate, downward through the recess *a'* formed therein, around a second fastening or anchoring device, C, upward through the recess *a* in the second slate, across this slate, and downward through the recess *a'* of the same, around a third fastening or anchoring device, C, upward through the recess *a* formed in a third slate, across this last-mentioned slate, and downward through the recess *a'* formed therein, and so on through the entire row of slates, the end of the strap B being finally secured to a fastening device, C. The next succeeding row of slates are then placed in position, with their lower portion lapping over the first row of slates, and the part so lapping over covering from sight and protecting the strap B, which has been used to hold in place the row of slates next below it in the series, and so on until the entire roof is covered, the straps acting as clamps to hold the slates in position, and the recesses *a a'* assisting in keeping the straps in place, and, with the straps, preventing the tiles from working out beneath the straps.

To prevent the straps B from becoming loosened from the fastenings or anchors C they have two cuts, as with tinners' shears, made in one side, and the tongue *b* in this way formed is folded over against the side of the strap, as shown in Fig. 2, which not only unites the two sides of the strap together, but it also draws the strap more tightly around the fastening or anchoring device C. To further secure the strap to the anchoring device and keep it in position, the portion *c* of the fastening device, around which the strap passes, may be turned down slightly, as shown in Fig. 2.

It is hardly necessary to add that the slates are laid break-joint fashion, as is ordinarily the case.

From the foregoing description of my fastening for slates and tiles it will be seen that they are secured in position with great firmness and strength; that instead of depending upon the head of a nail or screw-nut only to keep the slate in place, which is liable to be drawn through the holes through which it passes and the slate become loosened thereby, the entire width of the slate is employed to keep it in place, and the slate is not weakened by perforations through it.

The straps B and the fastening devices C may be made of zinc or composition metal to guard against oxidation.

By my process slates and tiles may be applied to comparatively flat roofs and the roof be rendered perfectly tight, which, with the ordinary manner of slating, could not be done satisfactorily.

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

1. A slate roof with metal straps passing across the upper surface of the slates and through recesses formed in the edges thereof, and secured to fastening or anchoring devices fixed to the rafters, whereby the slates are held in position, substantially as described.

2. In a slate roof, a series of fastening or anchoring devices fixed to the rafters, in combination with a metal strap which passes alternately across the slates and around said fastening or anchoring devices, substantially as and for the purpose described.

3. In a slate roof, metal straps with a tongue formed thereon and folded over against the side of the strap, whereby the two sides of the strap are united and the same more firmly secured to fastening or anchoring devices fixed to the rafters, substantially as described.

LAWRENCE E. GANNON.

Witnesses:

D. M. OGDEN,
J. J. O'CONNOR.