2 Sheets—Sheet 1.

E. N. LESLIE.

Covering the Side and Roof of Buildings with Slate.

No. 199,075. Patented Jan. 8, 1878.

Fig. 1

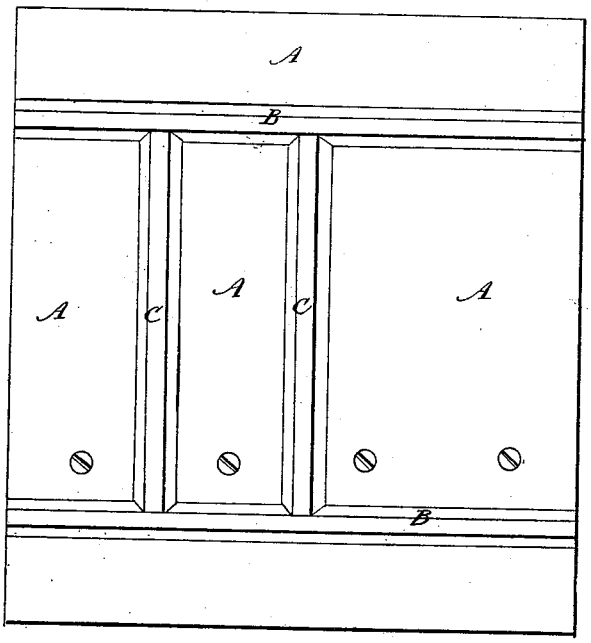


Fig. 3

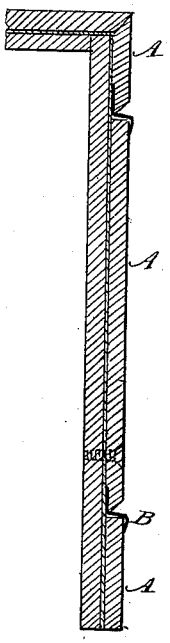


Fig. 4

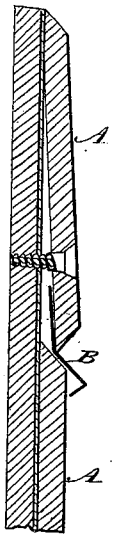


Fig. 2

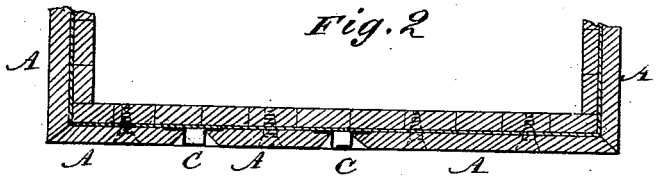


Fig. 7

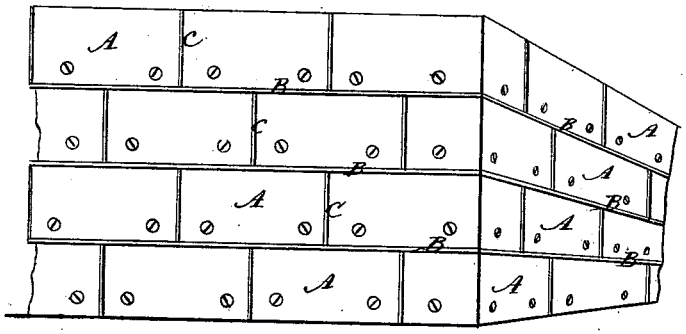


Fig. 5

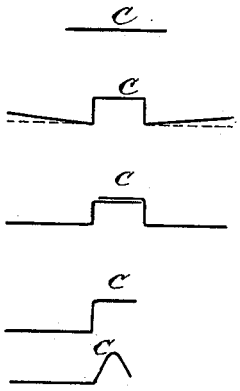
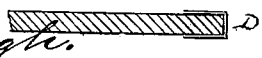


Fig. 6



WITNESSES:

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2 Sheets—Sheet 2.

E. N. LESLIE.

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Fig. 8

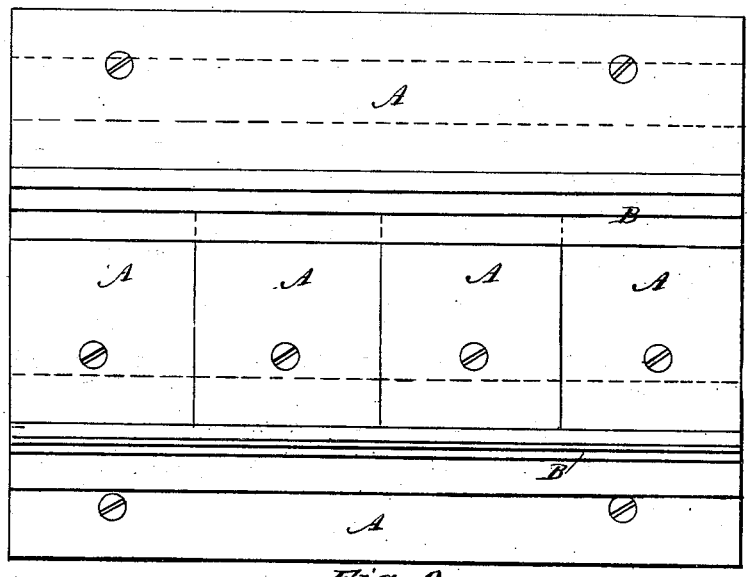


Fig. 9

Fig. 10

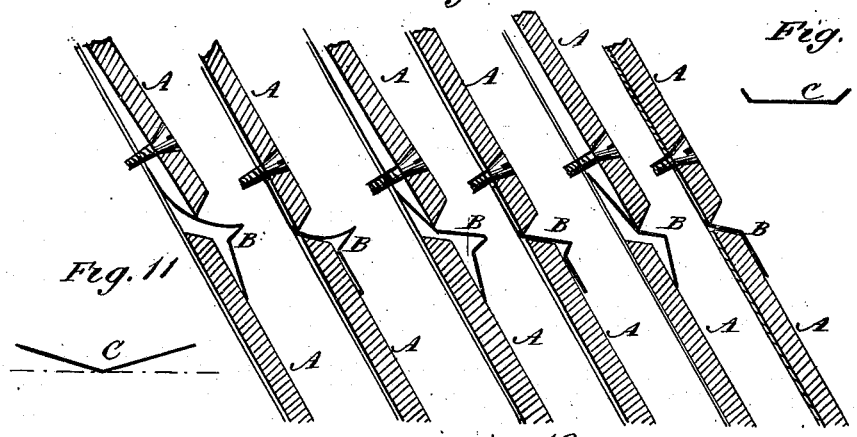
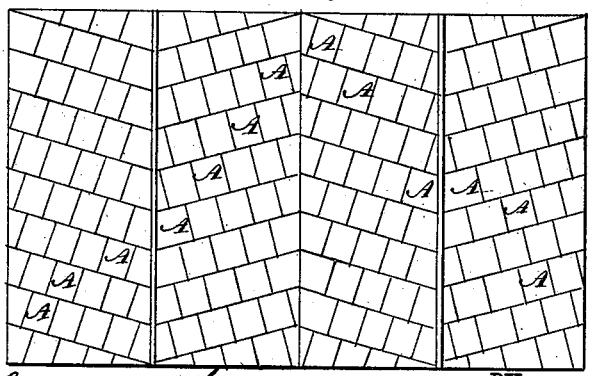


Fig. 11

Fig. 12



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UNITED STATES PATENT OFFICE.

EDMUND N. LESLIE, OF SKANEATELES, NEW YORK.

IMPROVEMENT IN COVERING THE SIDES AND ROOFS OF BUILDINGS WITH SLATES.

Specification forming part of Letters Patent No. **199,075**, dated January 8, 1878; application filed November 10, 1877.

To all whom it may concern:

Be it known that I, EDMUND NORMAN LESLIE, of Skaneateles, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Covering the Sides and Roofs of Buildings with Slates, of which the following is a specification:

Figure 1, Sheet 1, represents a portion of the side of a building illustrating my invention. Fig. 2, Sheet 1, is a horizontal section of the same, showing the construction of the vertical seams. Fig. 3, Sheet 1, is a vertical section of the same, showing the construction of the horizontal seams. Fig. 4, Sheet 1, is a view of a portion of Fig. 3 enlarged, and showing the upper slate partly drawn to its place. Fig. 5, Sheet 1, are detail cross-sections of the sheet-metal strips for the seams. Fig. 6, Sheet 1, represents a sheet-metal binding for the edges of the slates under projections. Fig. 7, Sheet 1, is a perspective view of a portion of a building to which my invention has been applied. Fig. 8, Sheet 2, represents a portion of the roof of a building to which my invention has been applied. Fig. 9, Sheet 2, are detail sections illustrating the construction of the cross-seams. Fig. 10, Sheet 2, is a cross-section of a strip of sheet metal for the upright seams. Fig. 11, Sheet 2, represents a modification of the same. Fig. 12, Sheet 2, is a view representing a mode of arranging the slates upon a roof.

Similar letters of reference indicate corresponding parts.

The object of this invention is to cover the sides and roofs of buildings with slates, laid flat or without lap, in such a way as to make the covering water-proof against rain and fire-proof against fire from the outside, and in such a way that the covering may be economical and easily and quickly applied.

The invention consists in the combination of longitudinally-bent strips of sheet metal with the adjacent edges of slates laid flat upon the surface to be covered, to form water-tight cross and upright seams between said edges, and in the combination of a plastic cement with the sheet-metal strips and the edges of the slates, as hereinafter fully described.

In applying this invention to practical use the sides and roof of the building are covered with a sheeting of boards, and a layer of paper may be placed upon the outer surface of said sheeting as a non-conductor of heat or cold.

A represents slates, which are secured in place by screws passing through them near their lower edges, and countersunk, so that their heads may be flush with the outer surface of the said slates. The horizontal seams between the edges of the adjacent slates are formed by strips B of sheet metal, which are bent longitudinally, so that their lower edges may overlap the upper edges of the lower slates, and their upper edges may be beneath the lower edges of the upper slates, as shown in Figs. 3, 4, and 9. The angles of the strips B are so formed that the said strips may be drawn down into place by the lower edges of the upper slates as said upper slates are drawn into place by their screws, so that the elasticity of the strips B may hold their edges pressed closely against the slates to insure close joints.

In the case of cross-seams upon a roof, the middle part of the strips B may be made straight or curved, and the lower angle may be so formed as to project above the slates, as shown in Fig. 9, to form gutters to guide the water to the upright channels. The upright seams are formed of strips C of sheet metal, the sides of which may incline upward from the center, as shown in Figs. 5 and 11, or from near said side edges, as shown in Fig. 10, so that their elasticity may hold their edges pressed firmly against the slates when drawn down flat by said slates.

The strips C may have a square bead formed longitudinally upon their middle parts, to project between the slates, as shown in Figs. 1 and 2. This bead is especially intended for use upon the sides of the buildings, and need not be used upon roofs. The overlapping edges of the strips B and the projecting beads of the strips C will represent mortar seams, and will give the building the appearance of being a stone structure. This effect may be increased by painting the strips B C white before applying them to the building, which will have the further advantage of preventing the said strips from being injured by rusting.

The lower ends of the upright strips C overlap the upper edges of the cross-strips B, to

prevent water from finding its way in beneath the slates.

The entrance of water may be further guarded against, especially upon roofs, by applying an elastic or plastic cement to the side parts of the strips before securing the slates in place.

In the case of roofs, I prefer to arrange the slates A diagonally in sections, as illustrated in Fig. 12, so that the cross-seams may be short and inclined. In this case the upright seams at the lower ends of the short inclined seams should be made wider, to serve as channels to carry the water to the eaves. The edges of the slates A along projections may be provided with a sheet-metal binding, D, formed of strips of sheet metal bent twice at right angles, so as to fit upon the said edges, the outer parts of said strips representing mortar seams.

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

1. The combination of longitudinally-bent strips of sheet metal B C with the adjacent edges of slates A, laid flat upon the surface to be covered, to form water-tight cross and upright seams between said edges, substantially as herein shown and described.

2. The combination of a plastic cement with the sheet-metal strips B C and the edges of the slates A, substantially as herein shown and described.

EDMUND NORMAN LESLIE.

Witnesses:
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ELIAS THORM.