

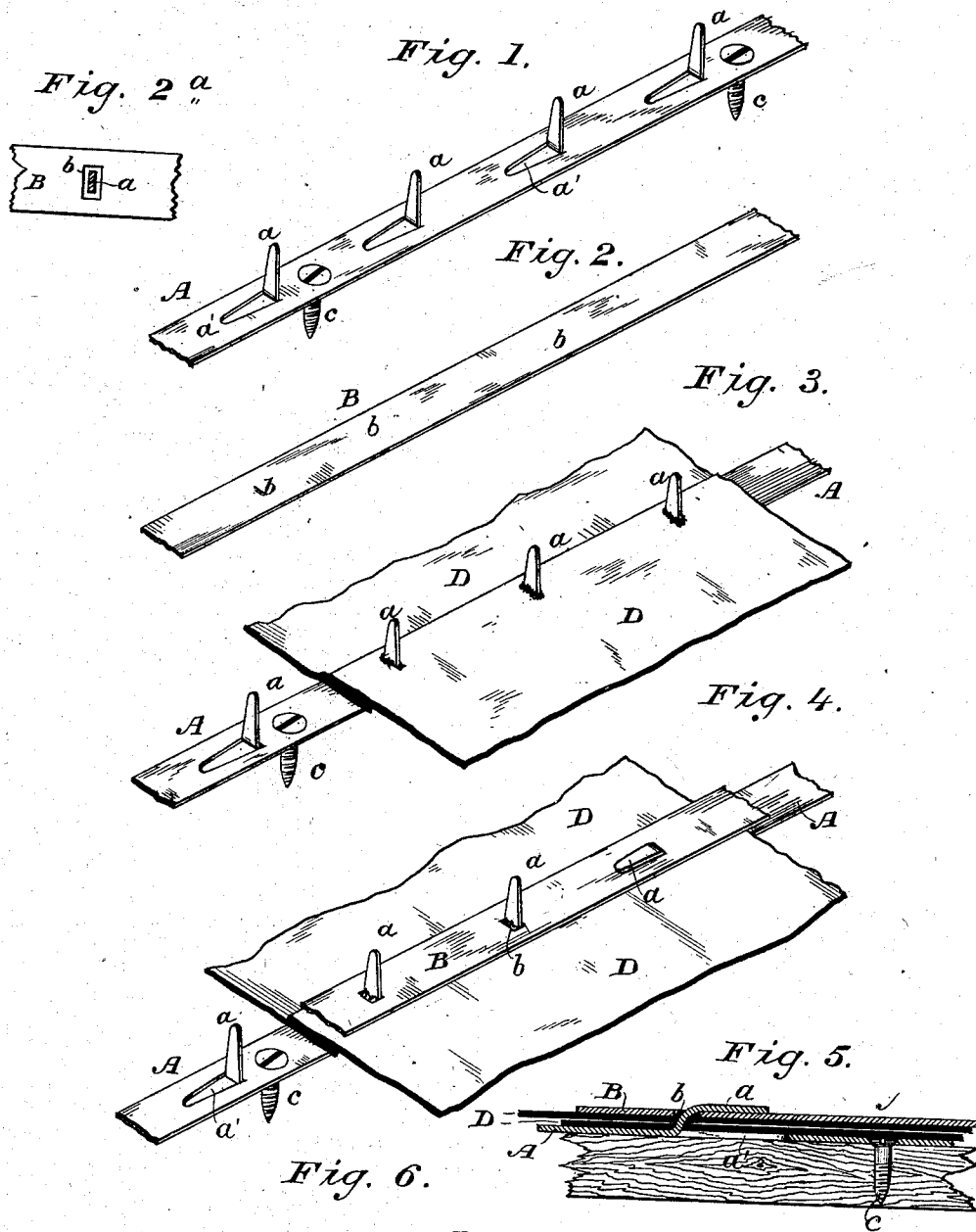
(No Model.)

L. L. SAGENDORPH.

DEVICE FOR SECURING ROOFING MATERIAL UPON ROOFS.

No. 255,087.

Patented Mar. 14, 1882.



Witnesses:

Wm A. Skunk
Wm C. East

Inventor:

L. L. Sagendorph,
by his Attorney,
Frank L. Pope

UNITED STATES PATENT OFFICE.

L. LEWIS SAGENDORPH, OF CINCINNATI, OHIO, ASSIGNOR TO THE NEW YORK IRON ROOFING AND PAINT COMPANY, OF NEW YORK, N. Y.

DEVICE FOR SECURING ROOFING MATERIAL UPON ROOFS.

SPECIFICATION forming part of Letters Patent No. 255,087, dated March 14, 1882.

Application filed December 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, L. LEWIS SAGENDORPH, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Devices for Securing Roofing Material Upon Roofs, of which the following is a specification.

The object of my invention is to furnish an economical, convenient, and efficient means of securing roofing fabrics to the roofs of buildings, by which the joints may be made perfectly water-tight, and the fabric at the same time more securely fastened than by the use of the nails or other similar means which have hitherto been employed.

My invention consists in general in first fastening to the roof, before the water-proof canvas or other fabric is placed thereon, a strip of sheet metal armed with a series of points normally projecting upward at right angles therefrom. This strip is permanently secured to the roof, by means of screws or otherwise, and the overlapping edges of the canvas or other fabric are afterward placed thereupon and pressed down, so that the points are caused to penetrate and pass upward through both thicknesses of the fabric. After the two overlapping edges have been placed one above the other in this manner and the points passed through them, a second metallic strip, perforated with suitable apertures at distances apart corresponding to those of the points in the first-named strip, is laid upon them and pressed down, bringing the edges of the fabric firmly together, and the points of the lower strip, which project through these apertures, are afterward hammered down, so as to clinch and interlock with the upper strip, and thus hold the whole firmly in place. This operation forms a water-tight joint between the edges of the fabric, having a uniform bearing and a firm attachment to the roof-boards from one end to the other.

In the accompanying drawings, Figure 1 is a perspective view of a portion of the lower sheet-metal strip provided with points. Fig. 2 is a perspective view of the upper sheet-metal strip with its corresponding apertures. Fig. 3 is a perspective view, showing the manner in which the edges of the roofing fabric

are placed upon the lower strip preparatory to forming the joint. Fig. 4 shows the same after the upper strip has been placed in position and one of the points hammered down and clinched. Fig. 5 is a longitudinal section through the completed joint, and Fig. 6 is a transverse section of the same.

Referring to the drawings, A represents a strip of sheet metal, which may be of any convenient breadth and thickness, and which is provided with a series of points, *a a*, projecting from its upper surface at right angles. These points may be most conveniently formed in practice by punching a triangular piece from the body of the strip, as at *a'*, and bending the same upward at right angles—a process which may conveniently be performed by means of suitable machinery.

In carrying out my invention I prefer to make use of strips of soft sheet-iron—say three-quarters of an inch in breadth and one thirty-second of an inch in thickness—and to form the points *a a* so that they will be one inch apart, projecting upward about three-fourths of an inch.

In Fig. 2, B shows the upper strip, which is preferably of the same material, and also the same breadth and thickness, as the lower strip, but is perforated by means of a punching device, or otherwise, with a series of rectangular apertures, *b b*, corresponding to the points *a a* upon the lower strip, A. The apertures *b b* are the same distance apart from center to center as the points *a a*, so that the latter will easily pass through the former when the strips are laid parallel to each other.

The manner in which I apply the above-described devices for the purpose of securing the roofing fabric to the roof is as follows:

Having first ascertained the position of the joint, or place where the adjacent edges of two pieces of the fabric are required to overlap each other, the strip A is first firmly secured to the roof-boards, which may be effected by means of screws *c c*, passing through it and into the board D at suitable intervals, as shown in Figs. 1 and 5, or by means of nails or other convenient means, and the overlapping edges of the fabric *d d* are then laid upon it. The fabric being pressed down, the points *a a* will penetrate through it and project above its upper

surface, as shown in Fig. 3. The upper perforated metal strip, B, is then laid upon the upper surface of the fabric and pressed firmly down upon it, as shown in Fig. 4, the points *a* now projecting upward through the apertures *b b*, provided for that purpose. These apertures are purposely made considerably larger than the points which enter them, being of greater length as well as breadth, as shown. Hence a portion of the fibers of the canvas or other fabric which have been severed by the points *a a* will be forced upward into the space remaining between each point *a* and the edges of its corresponding aperture *b*. At this stage of the process the apertures *b b* may with advantage be filled with thick metallic paint or other similar water-proof material, which, in connection with the fibers hereinbefore referred to, forms a packing, which, when compressed and allowed to dry, prevents any moisture whatever from passing through said apertures or penetrating beneath the surface. The operation is then completed by bending down or clinching the projecting points *a a* by means of a hammer or other convenient instrument, as shown in the perspective view, Fig. 4, and in the section, Fig. 5.

It is obvious that the outer or single edges of the roofing fabric may be secured in a manner similar to that employed for the joints.

My improved device may be very easily and cheaply made, and may also be applied with great convenience and facility, while at the same time it forms a much tighter and stronger joint than can be produced by the means hitherto employed, thus greatly enhancing the durability and efficiency of the protection afforded by the fabric.

I claim as my invention—

1. The combination, substantially as hereinbefore set forth, of a sheet-metal strip having a series of flexible points normally projecting at right angles from its surface, means, substantially as described, for securing said strip permanently to a roof or other structure, and a second strip perforated with a series of apertures corresponding to the projecting points of the first strip, whereby the edges of a roofing fabric may be secured to each other and to the roof by the interlocking of the two metallic strips between which they are placed.

2. The combination, substantially as hereinbefore set forth, with the edges of one or more pieces or sections of roofing fabric, perforated in such manner as to leave a burr, of two parallel clamping-plates or strips of sheet metal, one of the latter being provided with a series of points, which pass through the fabric, and the other being perforated with a corresponding series of apertures of sufficient size to permit the said points to enter, together with a sufficient portion of the fiber of the fabric, to serve as a water-tight packing, the whole being afterward compressed together by bending down or clinching the projecting points of the first clamping-strip.

In testimony whereof I have hereunto subscribed my name this 1st day of December, A. D. 1881.

L. LEWIS SAGENDORPH.

Witnesses:

C. BASFORD, Jr.,
CHAS. S. HOLMES.