(No Model.)

W. A. LIST.

SHEET METAL ROOFING ANCHOR.

No. 332,413. Patented Dec. 15, 1885.

Fig. 1.

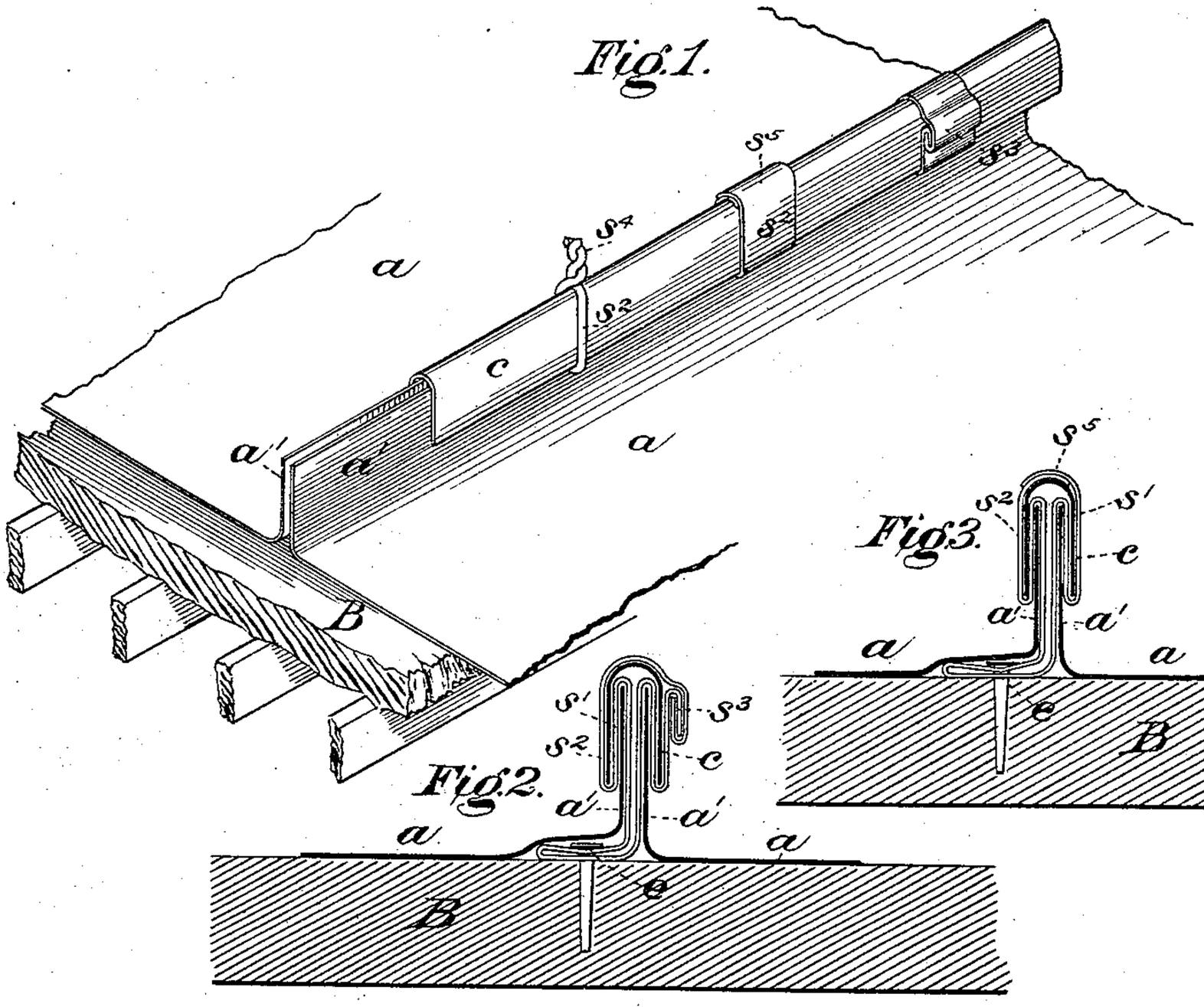
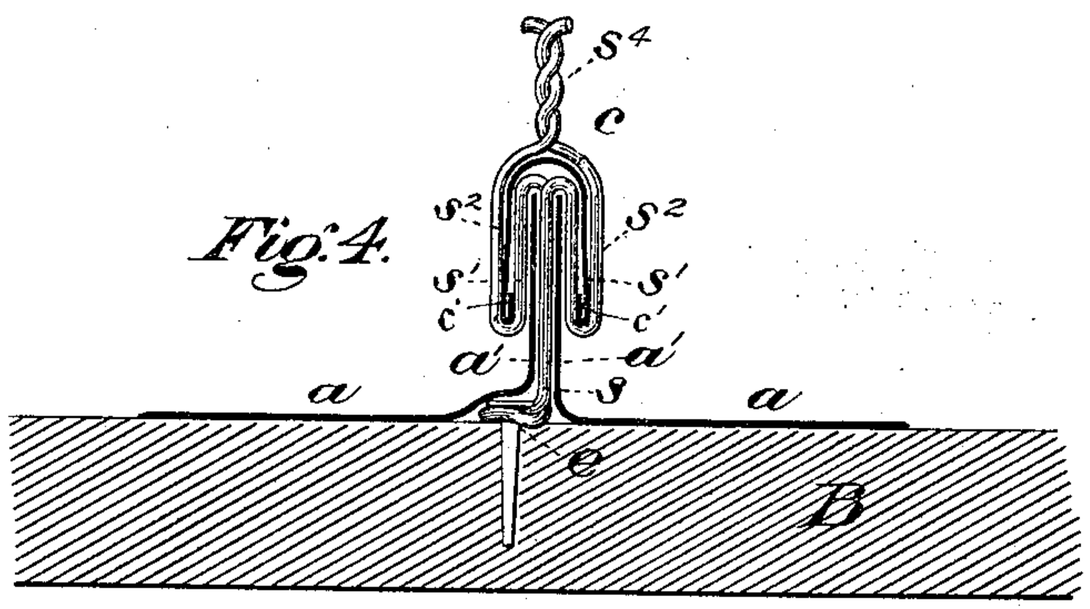


Fig. 2.

Fig. 3.

Fig. 4.



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WILLIAM A. LIST, OF WHEELING, WEST VIRGINIA.

SHEET-METAL-ROOFING ANCHOR.

SPECIFICATION forming part of Letters Patent No. 332,413, dated December 15, 1885.

Application filed October 26, 1885. Serial No. 180,908. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. LIST, residing at Wheeling, in the county of Ohio and State of West Virginia, a citizen of the United States, have invented or discovered a certain new and useful Improvement in Sheet-Metal-Roofing Anchor, of which improvement the following is a specification.

In the accompanying drawings, which make part of this specification, Figure 1 is a view in perspective of a section of a house-roof illustrative of my invention, and Figs. 2, 3, and 4 are transverse sectional views through the joints and anchors.

In the laying of sheet-metal roofs flanges are commonly made along the up and down edges of the sheets, which flanges, projecting upward when the sheets are laid, are brought face to face. To exclude water, moisture, dirt, &c., from entering between these flanges, a U-shaped cap has been put over them, and various constructions of anchoring devices have been added by which to hold the caps in place on the flanges, and also to hold both sheets and caps securely in place on the roof.

My present invention relates, chiefly, to an improved construction of anchoring mechanism for the purpose thus indicated.

In the drawings, B represents a section of a roofing-board on which the metal sheets *a* are to be laid, and to which they are to be secured. These sheets are provided with the usual flanges, *a'*, along their up and down edges, and in laying the sheets these flanges are to be brought as close together as practicable face to face. The cap *c* is of the usual U shape, and it is applied in the manner well known in the art. For the purpose of securing the cap in place on the flanges, and also of anchoring both the cap and sheets to the roof-board B, I make use of an anchoring mechanism which I will next describe. This anchoring mechanism may be made of either sheet metal or wire, or of metal of any desired form.

In the drawings I have shown a sheet-metal anchor in Figs. 1, 2, and 3, and a wire anchor in Figs. 1 and 4. Referring, first, to the former, each anchor consists of a sheet-metal strip, *s*, of suitable length and width, folded at or near its middle, and secured, as by a nail, to the roof-board at or a little to one side of the line of meeting of two flanges, as at *e;* or two strips may be employed, each being nailed by one end to the board B, as at *e*. These anchors are secured in place before the sheets which are to go on top thereof are laid, and then the sheets are laid so that the free ends of the anchor or anchoring-strips project up between the flanges *a'* of the sheets *a*. Such free ends are then bent outwardly and down, one over the upper edge of each flange, *a'*, and closed down against its flange, as at *s'*. Then the cap *c* is put on in the usual way, and the free ends of the anchoring-strips are then bent outwardly and upwardly and closed in well against and over the cap, as at s^2, and the extreme ends are folded together into an interlocking engagement, or what may be termed a "lock-joint," as at s^3; or, in lieu of such interlocking, the ends of such strip may merely overlap each other, as at s^5, in which case the anchor-strips hold the roofing-sheets in place by virtue of their resistance as against straightening at the bends or angles; but preferably the lock-joint is more commonly used, as in the lock-joint the tensile strength of the material is brought into operation to hold the roofing-sheets in place.

In Fig. 4 I have shown substantially the same anchoring mechanism, but made of wire. As the bends, folds, &c., are the same as above set forth, it need not be further described, except to say that the lock-joint by which the extreme ends are secured together may be made by twisting such ends together, as at s^4, or in other desired way.

Whichever form be adopted, the anchors are to be arranged along each line of flanges at desired intervals.

For clearness of illustration I have in the drawings shown the devices described in a somewhat open position relatively to each other; but in the practical laying of such a roof they are of course to be brought into as close relationship as practicable, as will readily be understood by the skilled workman.

It may be added that the lower edges of the cap *c* may be left as they come from the shears, if so desired; but as such edges rust away with great rapidity I prefer to turn them in or

form a light seam thereon, as at *c'*. Then the lower edges, being of finished metal, will take the paint as usually applied and hold or retain it, so that the drip therefrom will act less destructively thereon.

I claim herein as my invention—

1. In combination with the flanges and cap of a sheet-metal roof, an anchoring mechanism secured to the roof, passing upward between the flanges of the sheets, downward over the upper edge of each flange, outward under each outer edge of the cap, and with its ends overlapping each other, substantially as set forth.

2. In combination with the flanges and cap of a sheet-metal roof, an anchoring mechanism secured to the roof, passing upward between the flanges of the sheets, downward over the upper edge of each flange, outward under each outer edge of the cap, and over the outside of the cap, and with its extreme ends united together by a lock-joint, substantially as set forth.

In testimony whereof I have hereunto set my hand.

WILLIAM A. LIST.

Witnesses:
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