

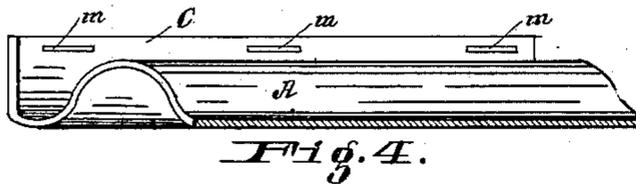
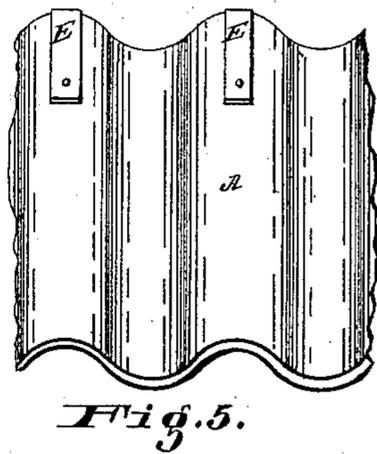
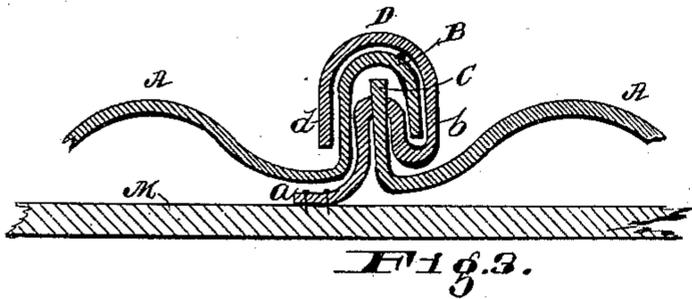
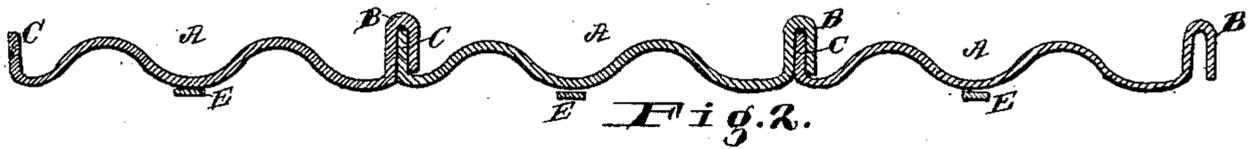
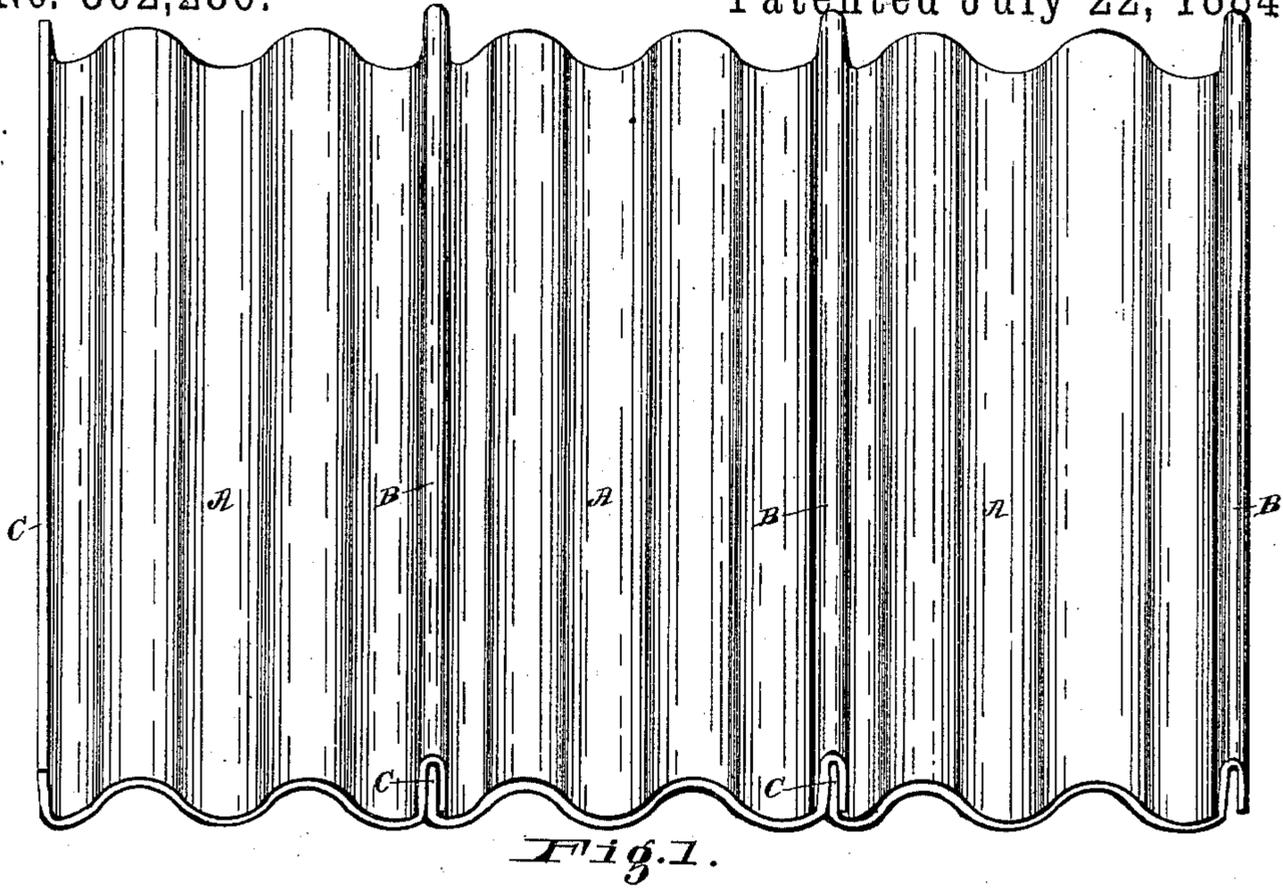
(No Model.)

2 Sheets—Sheet 1.

L. L. SAGENDORPH.  
CORRUGATED IRON ROOFING.

No. 302,286.

Patented July 22, 1884.



Attest.  
 E. R. Hill,  
 J. W. Strahli.

Inventor.  
 L. Lewis Sagendorph,  
 per Wm. Hubbell Fisher,  
 Atty

(No Model.)

2 Sheets—Sheet 2.

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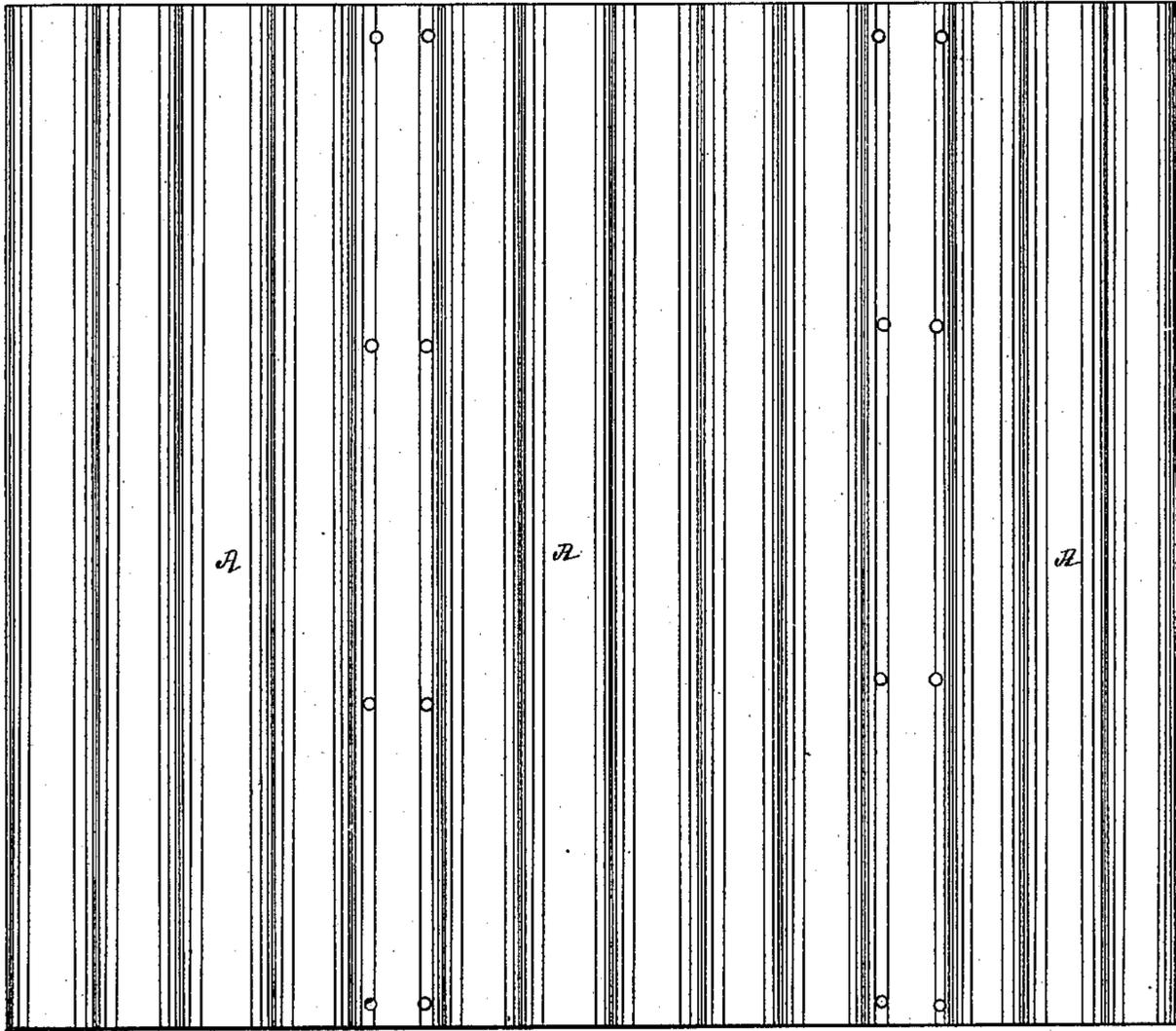


Fig. 6.

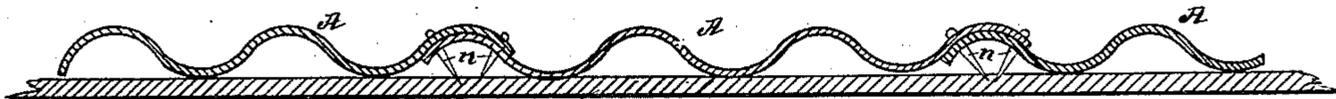


Fig. 7.

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# UNITED STATES PATENT OFFICE.

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

## CORRUGATED IRON ROOFING.

SPECIFICATION forming part of Letters Patent No. 302,286, dated July 22, 1884.

Application filed February 23, 1883. Renewed June 7, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, L. LEWIS SAGENDORPH, of the city of Cincinnati, in Hamilton county and State of Ohio, have invented certain new and useful Improvements in Corrugated Iron Roofing, of which the following is a specification.

The object of my invention is to provide a new and improved joint for corrugated iron roofing, by which a saving of material is effected at the same time that a more perfect and durable joint is made.

The various features of my invention, and the advantages resulting from their use when applied together, or when one or more of said features are applied without the remainder, will be fully apparent from the following description and claims.

Referring to the drawings forming part of this specification, Figure 1 is a perspective view showing three sheets of corrugated roofing. Fig. 2 is a sectional view of the same. Fig. 3 is an enlarged section showing the joint between two sheets and the preferred means for connecting the sheets to the roof. Fig. 4 is a view in perspective of a portion of a corrugated sheet having a half-V crimp, provided with slits for receiving a cleat, applied in the preferred manner of my invention. Fig. 5 is a perspective view of the lower or under side of a sheet, showing the end cleats or tongues for making a secure joint between the ends of the sheets. Figs. 6 and 7 are views illustrating the form of corrugated iron roofing and the manner of connecting it to the roof as heretofore employed.

These latter figures are shown to enable me to more clearly define my improvements.

As ordinarily constructed, the sheets A are evenly corrugated from side to side, the corrugations at the edges of the sheet being in all respects similar to those throughout the remainder of the sheet, and when the sheets are laid on the roof M the corrugation at the edge of one sheet is caused to overlap the corrugation at the edge of the adjoining sheet, as shown in Figs. 6 and 7, and a nail, *n*, is driven through these lapping edges into the roof-boards. The objection urged to this joint is that the water soon works up under the over-

lapping edge of the sheet, which causes the roof to leak, and also causes the iron to rust at the joint, and the roof thus wears out at the joints, while it is perfectly sound in other places. Another objection to this style of corrugated roof is that the lap must be so great that considerable material is wasted or unnecessarily used.

I prefer to use my invention in connection with such roofing as is hereinafter described, viz: The body of the sheet is corrugated, as in the old style of roofing. One edge of each sheet is provided with a V-crimp, B, and the other edge of each sheet has a flange or half-V crimp, C, turned at a right angle, or approximately such an angle, to the plane of the sheet. Then the sheets are laid on the roof. The V-crimp at one edge of a sheet is placed over the half-V crimp or flange of the adjoining sheet, and a pair of roofing-tongs is caused to grasp the V-crimp and flange, which are pinched tightly together, and this joint projects vertically from the plane of the roof, and consequently no water can work through, as in the other style of corrugated roofing joint hereinbefore described.

My invention relates to means for securing the sheet to the roof. The sheets may be corrugated or otherwise.

For the purposes of illustration, I have, in Figs. 3 and 4, shown my invention as applied to corrugated sheeting provided with a V-crimp, substantially such as hereinbefore described.

At intervals of preferably about one to three feet along the flange C, and near its upper edge, are a number of openings or slits, *m*, therein, and through each one of these slits *m* is respectively passed a cleat, D, one end, *a*, of which cleat is bent down and secured to the roof, usually by nailing it thereto, as shown in Fig. 3. The portion *b* of the cleat is bent down, as shown, to allow the V-crimp of the next sheet to slip down over the flange and the cleats, after which the end *d* of the various cleats is bent over the V-crimp, as shown in Fig. 3, and the V-crimp, flange, and each cleat are then tightly pinched together, making a tight joint and securing the adjoining edges of the two corrugated sheets to the roof.

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If desired, instead of passing the cleats D through slits in the flange C, they may be bent over the top of the flange; but I prefer to introduce the cleats through the flange, as they will then prevent any longitudinal movement of the sheets.

Another feature of my invention is as follows: In order to make a more perfect joint between the ends of the sheets, I secure to the under side of one end of each sheet (preferably to that end which is to overlap the adjoining sheet) a number of short strips or cleats, E, (see Fig. 5,) one end of said strips extending to or a little beyond the end of the sheet, the opposite end only of said strips being secured to the sheet. The first sheet having been laid and secured to the roof, the lower end of the adjoining sheet is caused to overlap the first sheet, the ends of the cleats being slipped under the upper end of the first sheet, thus uniting the adjoining ends of the sheets.

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

1. In a metal roof, the corrugated sheets A, one sheet being provided at one edge with a V-crimp overlapping the flange C of the adjacent sheet, said flange being provided with an opening or openings, *m*, in combination with a cleat or cleats, D, one end, *a*, of the cleat being secured to the roof, and the cleat then passing up between the V-crimp and the flange, thence through slit *m*, then down between the flange and V-crimp, thence around the edge of the crimp, and up over and around the crimp, substantially as and for the purposes specified.

2. In a sheet-metal roof, the sheets A, one end of each sheet being provided with the cleats E, secured to the under side thereof near one end, the end of said cleats being adapted to slip under the end of an adjoining sheet, substantially as and for the purposes specified.

L. LEWIS SAGENDORPH.

Witnesses:

J. WM. STREHLI,  
E. R. HILL.