

A. NORTHROP.
Metallic-Roofs.

No. 156,036.

Patented Oct. 20, 1874.

Fig. 1.

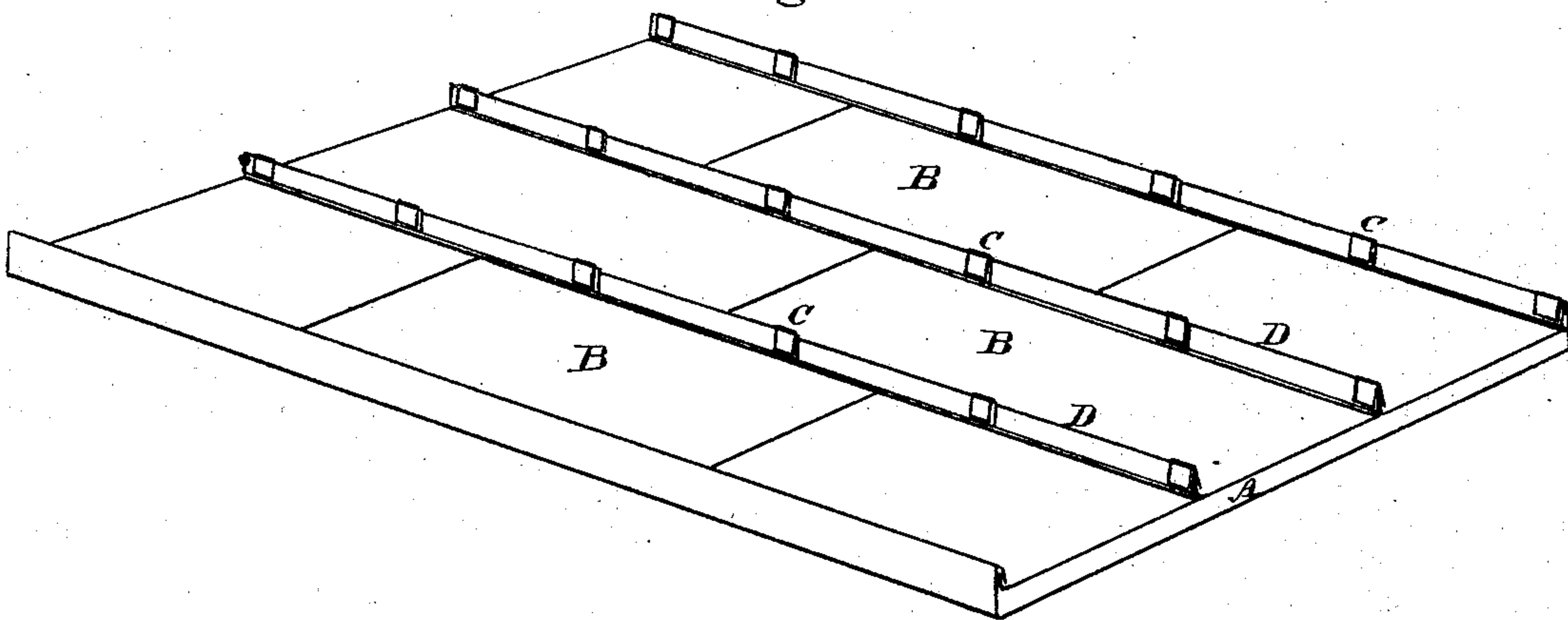


Fig. 2.

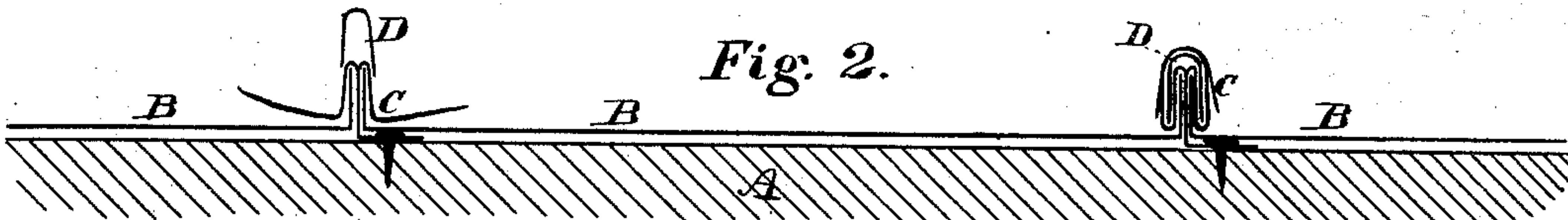


Fig. 3.

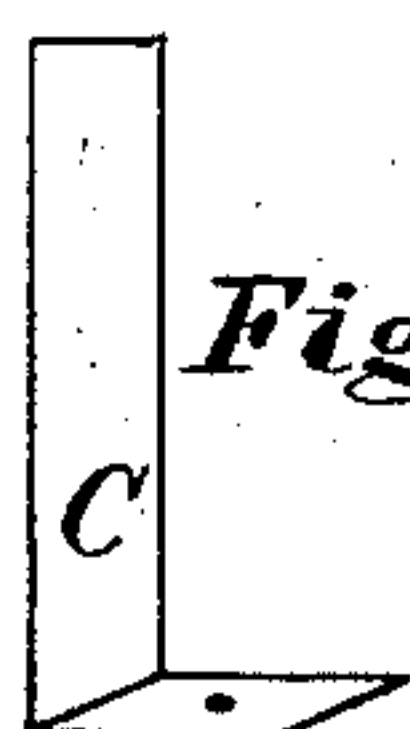
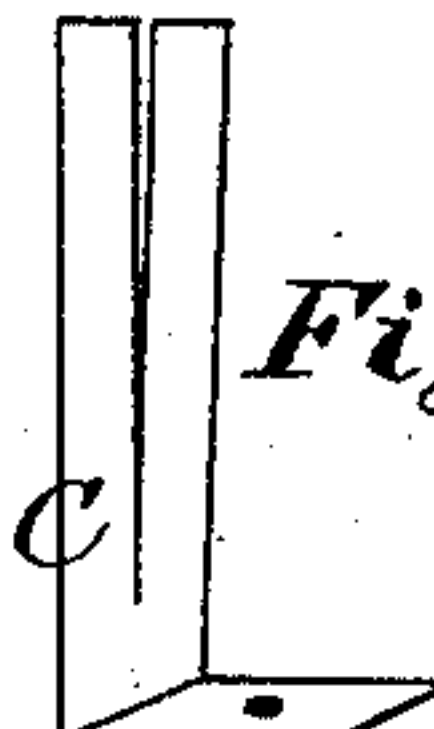


Fig. 4.



Witnesses.

Emma Withcomb
S. Milton York

Inventor.

Albert Northrop
Per Geo. W. Tibbitts Atty.

UNITED STATES PATENT OFFICE.

ALBERT NORTHROP, OF ELYRIA, OHIO.

IMPROVEMENT IN METALLIC ROOFS.

Specification forming part of Letters Patent No. **156,036**, dated October 20, 1874; application filed March 13, 1874.

To all whom it may concern:

Be it known that I, ALBERT NORTHROP, of Elyria, county of Lorain and State of Ohio, have invented a Metal Roof, of which the following is a specification:

This invention relates to the manner of securing the metal sheets to the roof-boards or to the rafters, as the case may require, in such a way as that in case of damage to the roof, or for any cause or purpose, any portion of the roof may be removed with ease and without damage to or interference with adjoining portions, or the whole roof may be taken off and used again without damage to the individual or several sheets composing the same.

For a full understanding of this invention, I will proceed to describe the same in detail, aided by the accompanying drawing, in which Figure 1 is a perspective view of a roof embodying my improvement. Fig. 2 is a sectional view, showing edge of sheets and end of cap or saddle, and manner of securing the same to the roof. Figs. 3 and 4 are detached views of the device for fastening the side or long edges of the sheets to the roof-boards, and also the cap or saddle to the seam.

A represents a portion of the roof-boards. B B are metal sheets, having their sides or long edges bent up, being joined at their ends to one another by the ordinary folded seam. Between the side seams of the said sheets B B is placed one or two strips of metal, C, having their lower ends secured to the roof-boards or rafters A by a nail, and standing between the upward-bent portion of the sheets B B. It is then bent downward over the upward-bent edges of the sheets B B. Next, over these upward-bent edges of the sheets B B is placed a cap or saddle-piece, D, and then the ends of

the strips C are again bent up and over the cap or saddle-piece D, completing the side seam, and forming a firm and strong rib. The said caps or saddle-pieces I make by cutting strips of metal across the end of a sheet, instead of lengthwise, as they are not as liable to break in bending them as when cut and bent with the grain of the sheet. This makes short but strong caps, and the fastening-strips C are placed at every intersection of the said caps, as seen in Fig. 1. The side seam is then finished by closing tight with mallet and seam-ing-head.

By this means no holes are made in any of the metal sheets except, perhaps, at the edges of the roof. In case, also, that a sheet should become injured, broken, or punctured, it may be easily taken out and repaired, and replaced, or another one put in its place, as, by turning up the ends of the strips C, the cap D may be taken off, the broken sheet removed and replaced, the cap put on, and the ends of the strip C bent over again—this without disturbing any of the surrounding sheets.

The fastening-strips C may be split down nearly to the roof, as seen in Fig. 4, making one strip to answer the purpose of two.

Having described my invention, I claim—

The strips C, in combination with caps or saddle-pieces D and the metal sheets B, the said strips C being fastened to the roof-frame, bent over the upright ends of the sheets B, and finally bent over the caps D, substantially as shown and described.

ALBERT NORTHROP.

Witnesses:

N. L. JOHNSON,
C. H. DOOLITTLE.