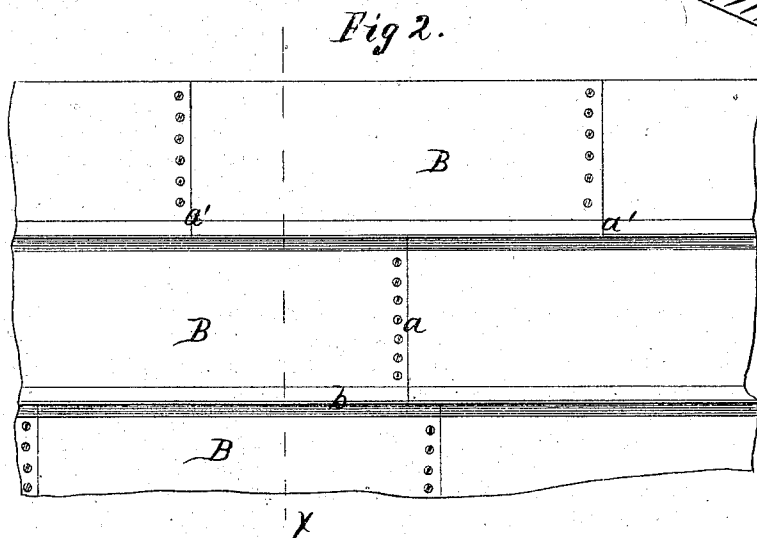
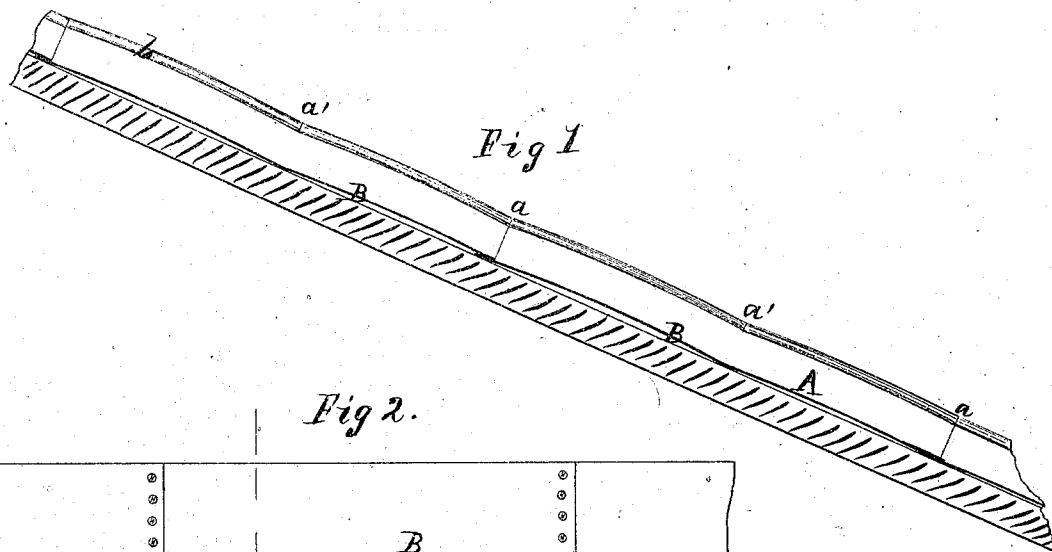


J. Siddons

Metallie Roof.

No. 120,829.

Patented Nov. 14, 1871.



Witnesses:

D. Hughes
H. Gregg

Inventor:

J. Siddons per
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Attys

UNITED STATES PATENT OFFICE.

JOHN SIDDONS, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN METALLIC ROOFINGS.

Specification forming part of Letters Patent No. 120,829, dated November 14, 1871.

To all whom it may concern:

Be it known that I, JOHN SIDDONS, of Rochester, in the county of Monroe and State of New York, have invented a certain Improvement in Metallic Roofs, of which the following is a specification:

The object of my invention is to provide against injury to the seams of metallic roofs by the expansion and contraction of the metal; and it consists mainly in laying the sheets slightly crowning between their points of attachment to the roof.

In the drawing, Figure 1 is a vertical section of a roof laid according to my improved plan. Fig. 2 is a plan view. Fig. 3 is a transverse section at the dotted line *x*, Fig. 2.

I have shown in the drawing a variety of roofs in which the longitudinal seams of the sheets are made upon the ribs *A* by a double or single fold, *b*; but my invention is equally applicable to other forms of sheet-metal roofs. The sheets *B* and ribs *A*, after being secured to the roof at one end, are lifted somewhat away from it, midway between the ends of the sheet, by a wedge of wood or other suitable material. The sheet is then fastened at the other end, and also the rib at the same point. The wedge may then be withdrawn and the adjacent sheets laid in a similar manner. This operation leaves the sheets curved from end to end, whereby, when they contract, they draw down nearly straight, and, when they again expand, simply rise to their original position. The folds *b* upon the ribs are made after the sheets are thus laid; consequently the joint is as perfect as though the sheets were straight.

It will be observed that it is necessary, where the cross-seams *a a'* "break joints," as shown in Fig. 2, to curve the sheets between the seams of each sheet and those of the contiguous sheets, as indicated by the curves from *a* to *a'*, Fig. 1; otherwise one part of the fold *b* would have to slide within the other by the expansion and contraction from point to point, which would soon render it useless.

In laying roofs where long sheets of metal are used it will probably be necessary to fasten the latter at several points longitudinally, and in this case the curve of the sheets must still be between such points of attachment, and the distance between these may be great or small, according to circumstances.

If the roof is laid in cold weather the curvature need not be so great as when laid in warm weather; but it is preferable to make it nearly the same, so that upon expanding the sheets may not warp in several places.

What I claim as my invention is—

A metal roof consisting of sheets of metal permanently united at their ends and sides, and having the body of the sheets curved or raised vertically between their end joints to allow for expansion and contraction and prevent them from being separated or torn loose, substantially as described.

JNO. SIDDONS.

Witnesses:

F. H. CLEMENT,
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(126)