(No Model.)

J. WALTER.

METAL ROOFING PLATE.

No. 256,083. Patented Apr. 4, 1882.

Fig. 1.

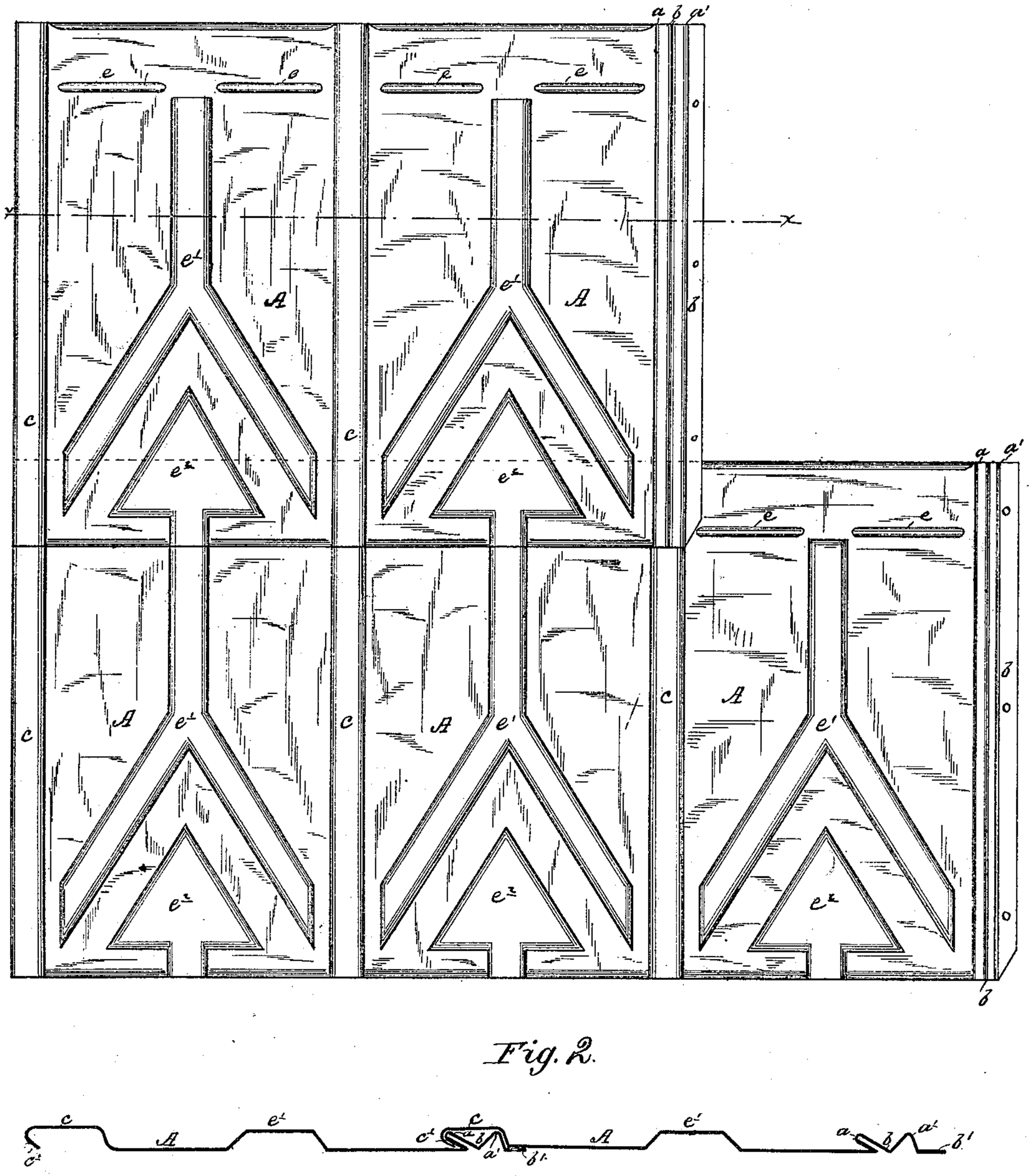

Fig. 2.

WITNESSES:

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JOHN WALTER, OF NASHVILLE, TENNESSEE, ASSIGNOR TO HIMSELF AND CHARLES B. COOPER, OF SAME PLACE.

METAL ROOFING-PLATE.

SPECIFICATION forming part of Letters Patent No. 256,083, dated April 4, 1882.

Application filed December 29, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN WALTER, of Nashville, in the county of Davidson and State of Tennessee, have invented a new and useful Improvement in Metal Roofing, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

This invention relates to metal plates for roofing houses; and it consists of a plate possessing novel features of construction, as will be hereinafter described.

In the accompanying drawings, Figure 1 shows the manner of applying my improved plates to the roof of a house; and Fig. 2 is a sectional view of two plates on line *x x*, Fig. 1.

The plate A, which is to be of any desirable size, is formed with two parallel corrugations, *a a'*, near one of its lateral edges, so constructed that the inner corrugation, *a*, shall serve as a catch to hold another plate to be placed at the side thereof, and the outer corrugation, *a'*, shall form, together with the inner one, a gutter, *b*, for carrying off any water that may enter the seam. Adjacent to the outer corrugation, *a'*, is a flange, *b'*, having suitable perforations, by which the plate is to be nailed to the boards of the roof. The opposite lateral edge of the plate is formed with a single broad corrugation, *c*, adapted to cover the corrugations and gutter of its adjacent plate similar to those above described, and the extreme edge of the plate adjacent to the corrugation *c* is bent under to form a catch, *c'*, which is to engage with the inner corrugation, *a*, of its adjacent plate. With this construction the broad corrugation *c* of one plate overlaps the gutter *b* and corrugations *a a'* of its adjacent plate, and forms therewith a water-proof seam. The plates are to be laid in horizontal layers, the upper layer overlapping the next lower one, and to prevent the effects of capillary attraction between two overlapping plates the upper end of each plate is provided with a horizontal corrugation, *e*, extending across nearly to the lateral corrugations, and at such a distance from the extreme top edge of the plate that the lower end of the plate overlapping it shall form a seam therewith. The corrugation *e* prevents the two overlapping plates from lying close together, and thus prevents the action of capillary attraction, and by means of an upward inclination given to the upper edge of the plate any water passing up between the plates is prevented from flooding the seam. The lower edge of each plate is formed with a downward inclination, which fits below the corrugation *e* at the upper end of the plate which it overlaps. With this construction a seam is formed between an upper and a lower plate, in which the horizontal corrugation and upward inclination of the upper edge of the lower plate offer two barriers to the passage of water through the seam, and at the same time form an open space between the plates to prevent capillary attraction.

As a further means of protecting the horizontal seams from flooding, each plate is constructed with a central corrugation, *e'*, having the shape of an inverted **Y**, and a corrugation, e^2, having the shape of an arrow-head, located between the bifurcations of *e'*, with the point inward. When one plate is arranged above another to form a seam the arrow-head of the upper plate forms a continuation of the **Y**-shaped corrugation of the lower plate, and the said corrugations thus serve to guide the water to the right and the left hand sides of the plate to the gutters, where flooding is less liable to ensue than at the central part of the horizontal seams, where there are no gutters. The horizontal corrugations will serve as a gage-line for laying the plates.

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

1. The combination of two sheet-metal roofing-plates adapted to be arranged with other similar plates in horizontal overlapping layers, and formed at their lapping horizontal edges, substantially as shown, to constitute a transverse anti-capillary seam, and provided with central longitudinal corrugations fitting one upon the other across the transverse seam at right angles, and formed to divert the water and direct it toward the side edges of the plate, substantially as shown and described.

2. A sheet-metal roofing-plate having one

of its lateral edges formed with two parallel corrugations to form a gutter, and the other lateral edge formed with a broad corrugation adapted to make a seam with the corrugations and a cap for the gutter of a corresponding plate, substantially as shown and described.

3. A sheet-metal roofing-plate having a gutter formed by corrugations at one side and a perforated flange at the side of the gutter, whereby it shall be nailed to the roof of a house, and a broad corrugation at the other side adapted to form a seam with the adjacent edge of a corresponding plate, substantially as shown and described.

4. The combination of two sheet-metal roofing-plates, each having corrugations shaped like an inverted Y and an arrow-head, and so arranged that the arrow-head corrugation of one plate shall form a continuation of the Y-shaped corrugation of the other, substantially as shown and described.

JOHN WALTER.

Witnesses:
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