

No. 832,003.

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P. S. TORRENCE.
METALLIC ROOFING PLATE.
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Fig. 1.

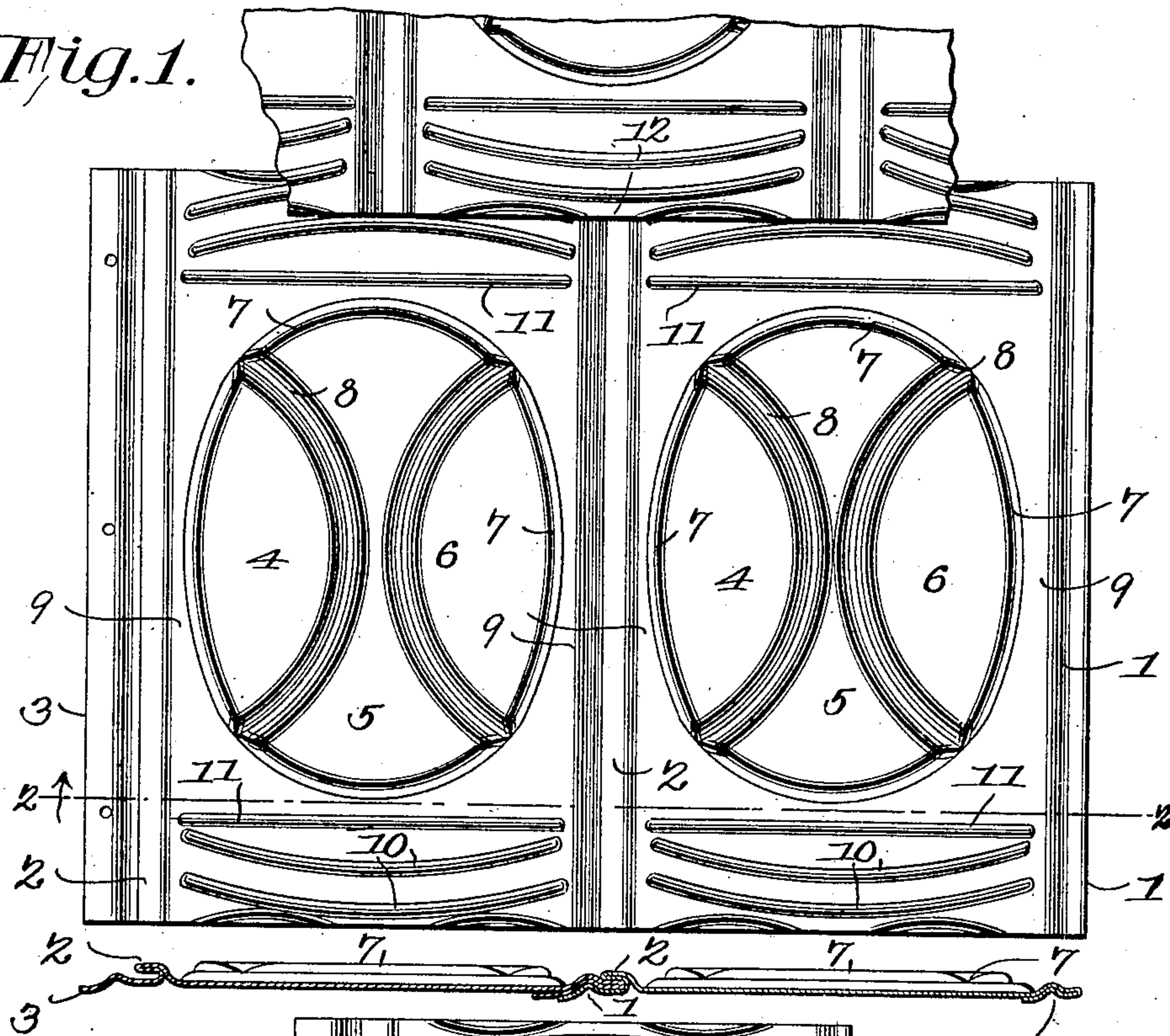
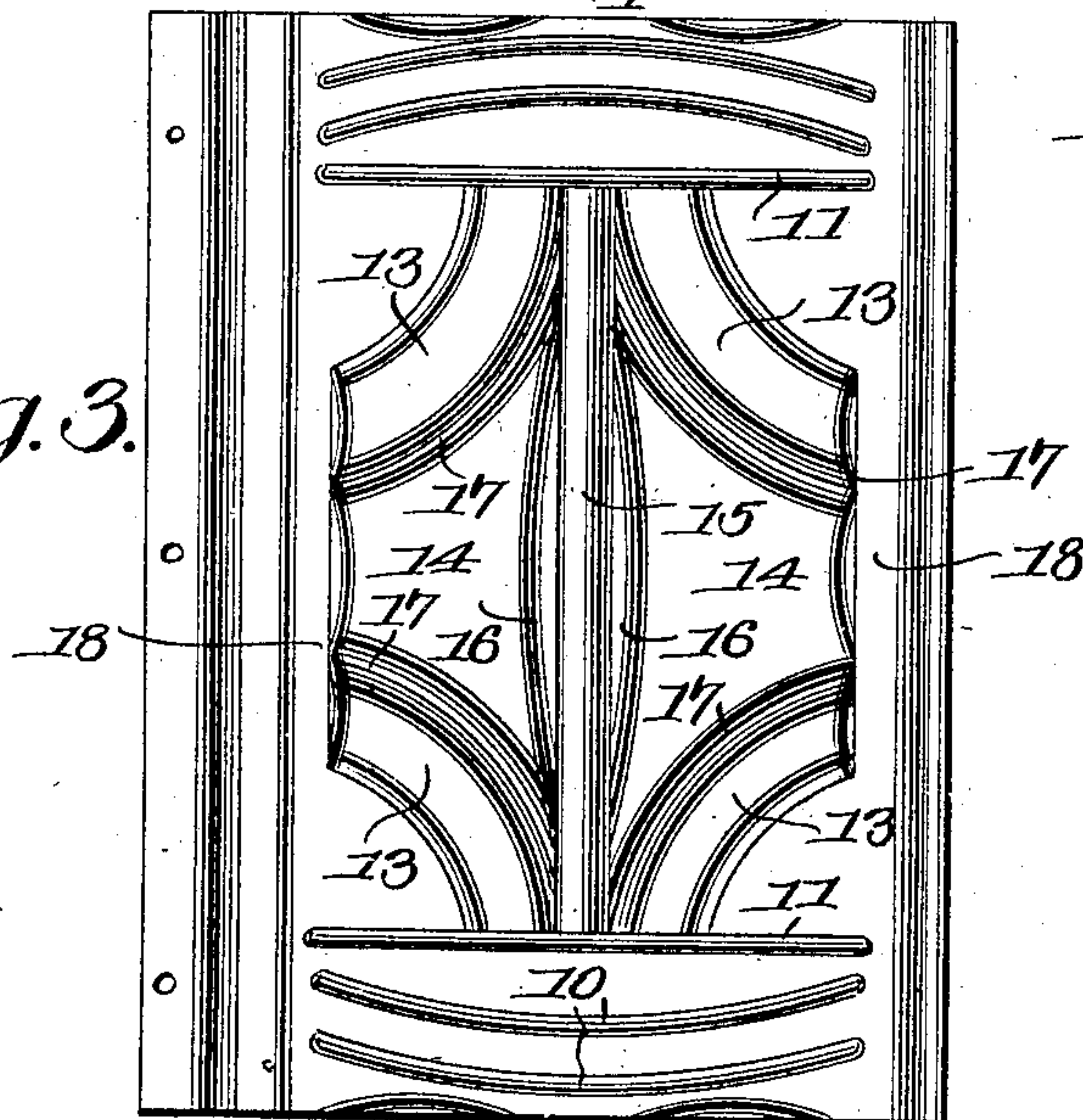


Fig. 2.

Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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METALLIC ROOFING-PLATE.

No. 832,003.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PLEASANT S. TORRENCE, a citizen of the United States, residing at Mooresville, in the county of Iredell and State of North Carolina, have invented a new and useful Metallic Roofing-Plate, of which the following is a specification.

This invention relates to sheet-metal roofing-plates.

10 The objects of the invention are in a novel and practical manner and without increasing the thickness of the plates, and thus adding to their weight and cost, to increase their rigidity to such an extent as to render them 15 positively non-bending or non-buckling from the force of the wind; to provide for the positive shedding of water and for the prevention of an accumulation of standing water at the joints, thereby in a measurable degree 20 to extend the life of the plate, and generally to improve and increase the efficiency of articles of this character.

With the above and other objects in view, as will appear as the nature of the invention 25 is better understood, the same consists in the novel construction of a sheet-metal roofing-plate, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a 30 part of this specification, and in which like characters of reference indicate corresponding parts, Figure 1 is a view in plan, exhibiting an assemblage of roofing-plates combined and constituting one form of embodiment of 35 the invention. Fig. 2 is a transverse sectional view taken on the line 2 2, Fig. 1, and looking in the direction of the arrow thereon. Fig. 3 is a view in plan of a slightly-modified form of plate.

40 Referring to the drawings, and to Figs. 1 and 2 thereof, there are exhibited two complete plates and a part of another assembled, and as the construction of each is a counterpart of the other a description of one will 45 serve for all. The plate may be made of any preferred metal, preferably of commercial tin-plate, and of any size and is provided on each edge with a locking-bead 1 and 2, the latter being extended to form a nailing-flange 50 3. These locking-beads are constructed in such manner that when the plates are assembled a seal will be formed which will preclude the entrance of water, and by means of the nailing-flange the plates may be positively 55 and firmly secured in position upon the roof-sheathing. The plate is formed at its center

with an approximately oval reinforced field formed of three upbowed reinforcers 4, 5, and 6, the reinforcer 5 extending the entire length of the field and the reinforcers 4 and 6 only a 60 portion of the length thereof, the edges 7 of the reinforcers (clearly shown in Fig. 2) being inclined toward the center of the field, thus in a positive manner to operate in shedding water. Extending on outward curved lines 65 from end to end of the field and spacing the reinforcers 4, 5, and 6 are downbowed channels 8, the bottoms of which lie in the same plane as the back or body portion of the plate and which subserve the dual function of present- 70 ing escapes for water flowing down over the plate and also of reinforcing it diagonally against any tendency to yield to upward pressure, the reinforcers 4 and 6 operating to 75 stay the plate transversely and the reinforcer 5 to stay it longitudinally. Of course the beads 1 and 2 extend above the plane or body of the plate, and these in conjunction with the reinforcers 4 and 6 form additional channels 9 80 for directing the flow of water downward and also to shed it away from the seam formed by the beads. At each terminal of the plate are two curved upbowed reinforcers 10, that extend transversely of the plate and terminate 85 short of the beads 1 and 2, thereby preventing the presentation of obstructions which would tend to interfere with the free escape of the water, the ends of the reinforcers being merged into the body of the plate adjacent to 90 the locks. Disposed between the reinforcers 10 and the field, at each end of the plate, is a straight upbowed reinforcer 11, the ends of which also terminate short of the locks for the reason assigned in connection with the 95 reinforcers 10. These last-named reinforcers 10 and 11 serve to render the plate rigid and non-yielding to anything but excessive strain, and being disposed adjacent to the terminals of the plate will positively prevent its 100 being lifted by wind-pressure—a source of danger and one that is common with the ordinary forms of roofing-plates in common use.

It will be seen from the foregoing description that a roofing-plate constructed in accordance with this invention is positively 105 braced at all points against any tendency to yield to any pressure to which it would ever be subjected in actual use, so that all danger of the plates being ripped off by wind-pressure is prevented, not only from the rigidity 110 secured by the construction exhibited, but also by reason of the fact that the plates are

overlapped and combined in such manner as that there can never be a sufficient volume of wind enter or work its way into or between the plates to detach them from their supports. Where the beads interengage, the overlapped plates above and below are provided intermediate of their widths with an upstruck portion or seat 12 to straddle the joint of two assembled plates, thereby to permit a close union between the assembled plates, as clearly shown in Fig. 1.

In the form of the invention shown in Fig. 3 the same arrangement of terminal transverse reinforces 10 and 11 is present; but in lieu of the approximately semicircular upbowed reinforces 4 and 6 and longitudinally-bowed reinforce 5 there is provided at each end two outwardly-curved upbowed reinforces 13 and two intermediate laterally-disposed upbowed reinforces 14, the inner edges of all these reinforces terminating with a central upbowed rib or reinforce 15, which extends from one to the other of the reinforces 11, forming thereby two longitudinal channels 16. The metal between the reinforces 13 and 14 is downbowed to form channels 17, which discharge into longitudinal channels 18, corresponding to the channels 9 in the form of the invention shown in Figs. 1 and 2. It will be seen that in Fig. 3 the same reinforcing features are present—namely, that the intermediate or central portion of the plate is reinforced longitudinally by the ribs 16, transversely by the rib 15, diagonally by the reinforces 13, and transversely by the reinforces 10 and 11. It will be noted that each half of the plate is a counterpart of the other, and by this construction the pieces that are cut off for the purposes of making fits in valleys, hips, and combs can be utilized in repair-work and in making joints at angles, thereby avoiding the necessity of destroying an entire plate for this purpose, such as would be necessary if the halves were un-

like in construction. It will further be noted that the shingles can be joined either on the right or the left hand side—that is to say, a piece cut from the right-hand side of the shingle can be readily joined to the left-hand side thereof, and vice versa. This feature is of importance, inasmuch as it will render it possible for a workman to utilize pieces cut off in effecting fits, as it generally happens that where a section is removed from the right-hand side of the shingle to effect a fit a like piece will have to be added to the left-hand side. By the interchangeable feature referred to all of the pieces that are removed can be used to advantage, thereby to effect a material saving in shingling or covering a roof with the plates of this invention.

The production of plates such as herein shown require no more metal than the ordinary form of reinforced metallic plates in common use and are strong, durable, and thoroughly adapted for securing the purposes designed.

Having thus described the invention, what is claimed is—

A sheet-metal roofing-plate having a central field formed with upbowed reinforces terminating in inclined water-shedding edges and with downbowed curved channels that cut through the said edges, and at its terminals with transversely-disposed curved and straight upstruck reinforces, the bellies of the curved reinforces being disposed toward the terminals of the plate, and the plate being further provided, intermediate of its width, with seam-engaging seats, the two ends of the plates being counterparts of each other.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

PLEASANT S. TORRENCE.

Witnesses:

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