Nov. 3, 1925. 1,559,967

G. B. KING

SHEET METAL ROOFING

Filed Feb. 17, 1923

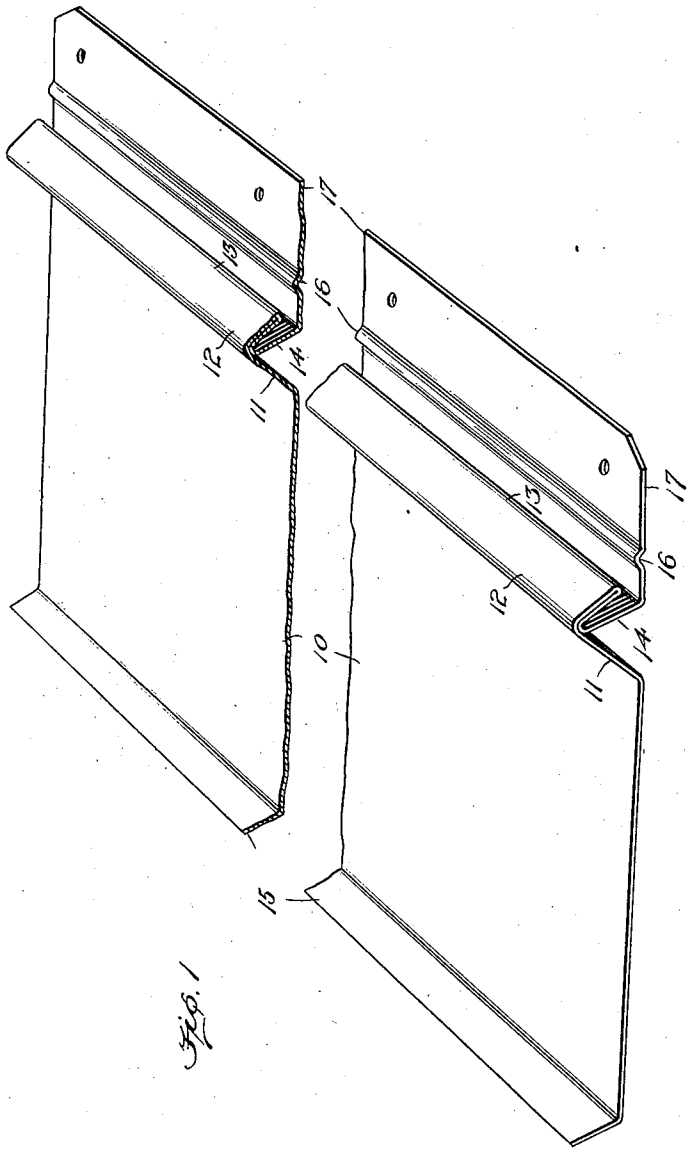


Fig. 1

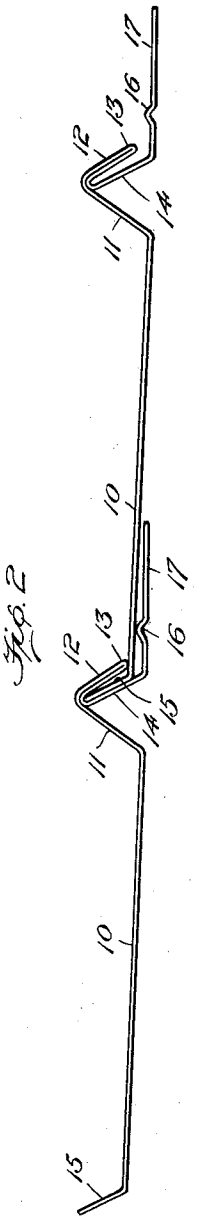


Fig. 2

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GEORGE B. KING, OF SOUTH BOSTON, VIRGINIA.

SHEET-METAL ROOFING.

Application filed February 17, 1923. Serial No. 619,687.

To all whom it may concern:

Be it known that I, GEORGE B. KING, a citizen of the United States, residing at South Boston, in the county of Halifax and State of Virginia, have invented certain new and useful Improvements in Sheet-Metal Roofing; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in sheet metal roofing and particularly to the means for interlocking adjacent edges of the juxtaposed sheets.

The objects of the invention are to reduce the cost, both of manufacture and laying, and to these ends the invention contemplates an interlocking edge formation capable of ready manufacture by simple bending operations and capable of easy assembly in laying the roof. The interlocking joint so formed securely holds the plates together, effectually prevents the ingress of water and protects the nails or fastening means from exposure to the elements.

Further objects are to secure the foregoing result with as little working or bending of the plates as possible; to decrease the quantity of material required for each plate; and to increase the area of the flat plane surface of the plate, this latter feature being important in that there is less liability of the plates being damaged by persons walking upon them.

While the invention may be embodied in plates of various design the preferred embodiment of the invention is illustrated in the accompanying drawing wherein—

Figure 1 is a perspective view of a plate embodying the invention; and

Fig. 2 is a sectional view taken transversely of two juxtaposed, interlocked plates.

Each plate has a body or main portion 10 intermediate the interlocking elements formed at its opposite edges for connecting the plates when assembled on the surface to be covered. Adjacent one edge, the plate has an inverted V-shaped ridge formed by bending the edge portion upward as at 11 and then downward, as at 12, to a point somewhat above the plane of the body portion 10. At this point the edge portion is bent back upon itself and this double thickness of metal forms an inclined sealing flange 13. At the top of the inner or under side of said sealing flange 13 the plate is again bent downwardly in spaced relation to said flange, as at 14, to a point below the sealing flange 13, where it is turned outwardly in a plane substantially coinciding with the plane of the body portion 10.

The opposite edge of the plate is bent up or inclined outwardly to form a sealing flange 15 and when two of the plates are assembled side by side this sealing flange 15 of one plate enters the space between the sealing flange 13 and inclined downwardly extending portion 14 of the other plate, the two flanges co-operating to lock the plates together and to prevent the entry of water beneath the plates. In assembling the plates and interlocking the edges of the juxtaposed plates, the edge of the flange 15 of one is preferably placed in the depression below flange 13 of the other by lifting the body of the plate away from the roof, and it is then forced up under said flange 13 by dropping the body of the plate down into the position it will finally occupy and where it is secured by nails or fasteners applied to the opposite edge beyond the bends therein.

To insure intimate contact of the two co-operating flanges 13, 15, of the juxtaposed plates, each plate has an upwardly extending projection, preferably a rib or bead 16 running the full length of the plate, this rib or bead being located between the flange 13 and the adjacent edge of the plate. When two plates are assembled, the body portion of one takes a bearing on the ridge of rib 16 of the other, the uppermost or first mentioned plate pivoting on said rib and forcing its flange upward into the top of the recess between flange 13 and bent-down portion 14 and tight against the flange 13 of the other plate. Each plate is preferably formed with a plain portion 17 intermediate ribs 16 and the adjacent edge for nailing the plates to the roof or other surface.

This wedging together of the co-operating flanges 13, 15 is not only advantageous in that the efficiency of the plates is increased, but by securing said wedging action without altering the flat, main surface 10 of each plate intermediate the flanges 13 and 15 the quantity of material consumed and the cost of production are reduced. The inverted V-shape of the ridges is best calculated to retain their formation and to

impart rigidity to the sheets, thus adapting the invention for most advantageous use in roofing formed of long and relatively narrow sheets commonly known as "galvanized roofing". This formation furthermore dispenses with the necessity of using wood strips at the joints and of providing special tools for performing bending operations in the laying of the roof.

What I claim is:

1. A sheet metal roofing plate having inclined sealing flanges adjacent its opposite edges with a plane surface extending from one flange to the other, and a raised portion between one of said flanges and the adjacent edge, said raised portion making a line contact with a juxtaposed plate, the latter overlapping the first plate and resting on said raised portion, said raised portion serving as a fulcrum on which the juxtaposed sheet pivots to wedge the cooperating flanges of the two plates together.

2. A long sheet metal roofing plate having a flat body portion with one edge bent up at an obtuse angle to form a sealing flange and the opposite edge bent to form an inverted V-shaped ridge with the double metal at the crest of the ridge bent down on the outer side of the ridge to form a sealing flange beneath which the obtuse angle flange of an adjacent sheet will seat, the edge of the sheet beyond the inverted V-shaped ridge being extended in substantially the plane of the body to receive the fastening devices, and a longitudinal bead formed in said extended portion adapted to engage the flat body portion of the adjacent sheet and to form a fulcrum on which the adjacent sheet rests and by means of which the sealing flanges of the two sheets will be forced together by the pivoting action of said adjacent sheet, said adjacent sheet being overlapped on but spaced from that portion of the first sheet which receives the fastening devices to permit such pivotal action.

GEORGE B. KING.