June 6, 1933. A. J. KRANTZ 1,912,486

ROOFING SHEET

Filed March 19, 1930

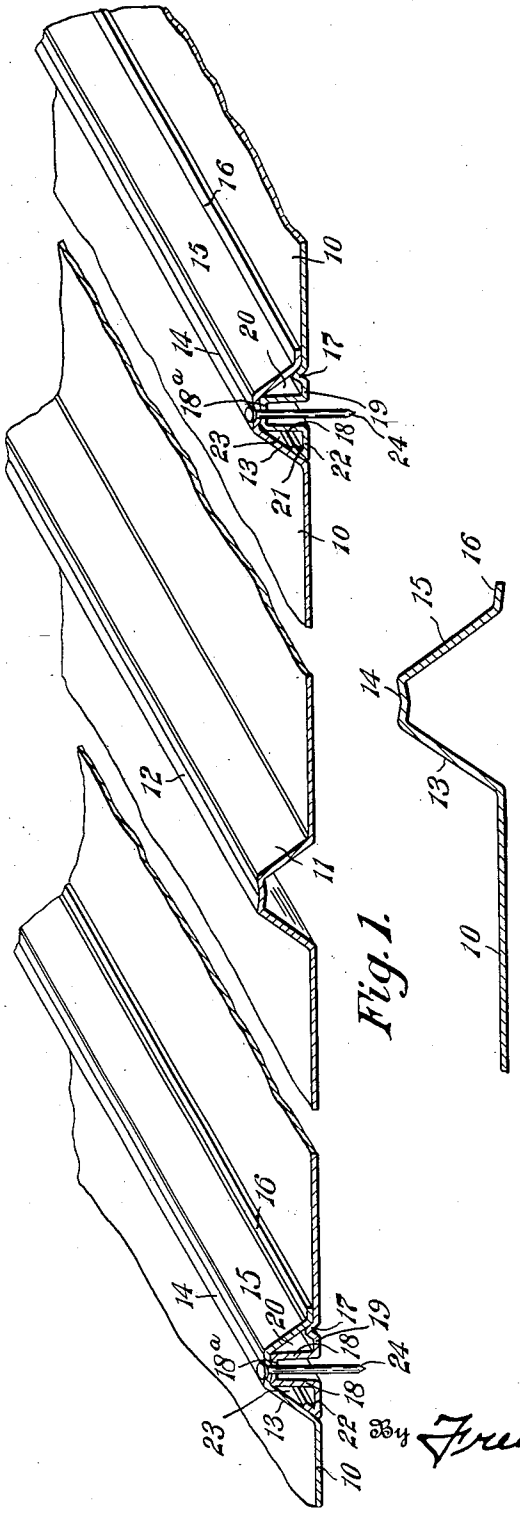


Fig. 1.

Fig. 2.

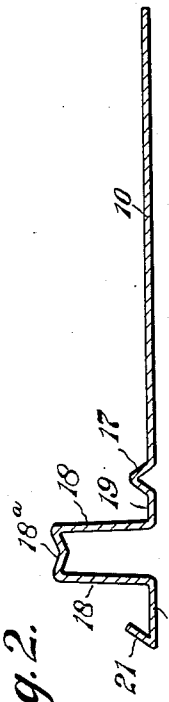


Fig. 3.

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UNITED STATES PATENT OFFICE

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ROOFING SHEET

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The invention relates to sheet metal roofing and more particularly to a joint for such roofing.

The object of the improvement is to provide a joint which shall possess the maximum strength and rigidity whereby lapped edges of the sheets may be nailed without danger of distortion of the joint.

A further object is to provide a joint of this character which is leak proof and which is provided with two spaced troughs for draining out any moisture which may pass into the joint, thus entirely obviating the possibility of the passage of water by capillary attraction to the interior of the roofing, at the same time providing for free circulation of air through the joint whereby any moisture collecting therein is quickly dissipated.

An embodiment of the invention is illustrated in the accompanying drawing, in which

Figure 1 is a perspective view of a roofing sheet constructed in accordance with the invention and forming joints at its side edges with similar sheets;

Fig. 2, a transverse section through the overlapping edge of the improved roofing sheet; and

Fig. 3, a similar section through the lapped edge thereof.

Similar numerals refer to similar parts throughout the drawing.

The improved roofing sheet is indicated generally at 10, and if desired, for the purpose of added strength as well as the appearance of the sheet, an inverted V, as shown at 11, may be formed through the central portion of each sheet, the apex of the V being flattened and slightly concaved, as shown at 12, to carry out the general design of the improved joint to which the invention pertains.

The overlapping lateral edge portion of each sheet may have substantially an inverted V formation comprising the outwardly inclined leg 13, the concaved seat 14 at the apex of the V, and the outwardly inclined terminal leg 15 which, for the purpose of added strength, may terminate in the angular flange 16 adapted to rest upon the surface of the next adjacent sheet, as shown in Fig. 1 of the drawing.

The opposite or lapped edge portion of the sheet is provided with an inverted V-shaped rib or bead 17, the extremity of the inclined terminal leg 15 being disposed in closely abutting relation to the outer face thereof.

Spaced from the rib 17 the sheet is shaped to provide a spaced pair of vertical legs 18 connected at their upper ends by the concaved seat 18*a*, upon which the seat 14 of the overlapping member is adapted to rest, as shown in Fig. 1.

A drainage trough 19 and air chamber 20 are thus formed between the rib 17 and the adjacent vertical leg 18. The terminal edge of the lapped edge of the sheet is provided with the upturned angular flange 21 located at substantially the same angle as the inclined leg 13 and arranged to be disposed in closely abutting relation thereto as shown in Fig. 1.

A drain trough 22 and air chamber 23 are thus formed between the inclined flange 21 and the adjacent vertical leg 18. When the joint is completed, as shown in Fig. 1, the concaved seat 14 provides a groove or trough through which nails or the like, as indicated at 24, may be easily and readily driven to secure the sheets upon a roof or the like.

The vertical legs 18 form a rigid and stable structure which permits the nails to be driven tightly down through the joint without danger of distortion or crushing, and which will resist such strains as are ordinarily imposed upon roof structures.

The drain trough 19 provides means for draining any moisture which may pass into the joint between the rib 17 and inclined leg 15, while any moisture which may pass by capillary attraction between the concaved seats 14 and 18*a* will be drained out through the trough 22, the air chambers 20 and 23 providing for circulation of air through the joint for quickly dissipating moisture which may collect in the troughs.

I claim:

1. A lapped joint for roofing sheets com-

prising a lapped member having a pair of spaced vertical legs, a preformed concaved seat connecting the upper edges of said legs, an upstanding rib in the sheet at a spaced distance from said vertical legs, an inwardly and upwardly inclined flange at the terminal edge of said lapped member, and an overlapping member formed on an adjacent sheet and composed of two inclined legs and a preformed concaved seat connecting said legs and resting on the seat of the lapped member, one of said legs being disposed with its lower portion in closely abutting relation with the rib on the lapped member, the other leg being disposed with its lower portion parallel to and in closely abutting relation with said inclined flange on the lapped member.

2. A lapped joint for roofing sheets comprising a lapped member having a pair of spaced vertical legs, a preformed concaved seat connecting the upper edges of said legs, an inverted V-shaped rib in the sheet spaced from one of said vertical legs, an upwardly inclined flange at the terminal edge of said lapped member and spaced from the other vertical leg, and an overlapping member formed on an adjacent sheet and having two spreading or outwardly inclined legs and a preformed concaved seat connecting said legs and resting upon the concaved seat of the lapped member, one of said spreading legs substantially abutting the upwardly inclined flange of the lapped member, the other spreading leg having its lower portion abutting said inverted V-shaped rib whereby a ventilating and drain chamber is provided between each vertical leg of the lapped member and the adjacent inclined leg of the lapping member.

In testimony that I claim the above, I have hereunto subscribed my name.

ARTHUR J. KRANTZ.