

Dec. 6, 1932.

W. G. HARTER
ROOFING SHEET

1,889,784

Filed March 11, 1931

Fig. 1.

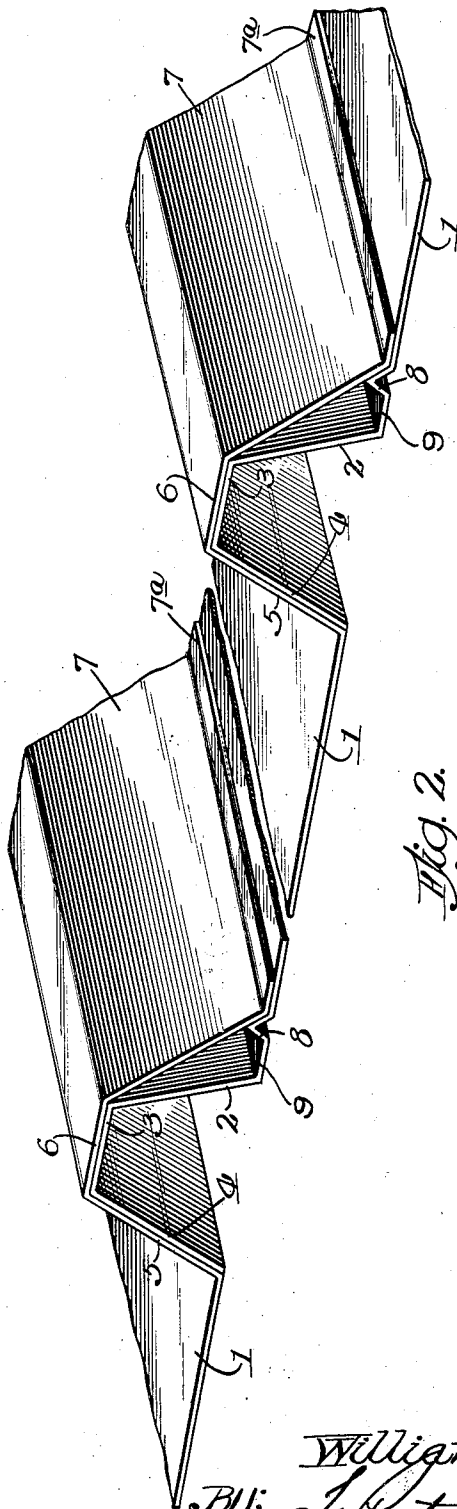
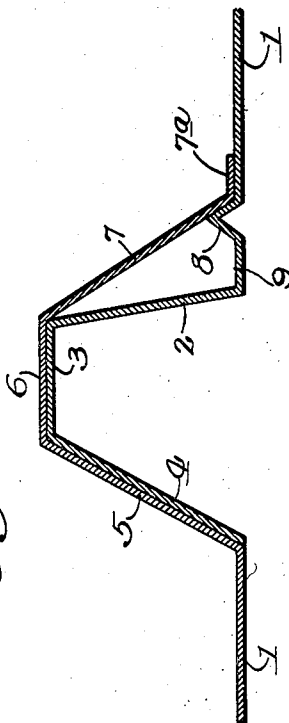


Fig. 2.



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UNITED STATES PATENT OFFICE

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ROOFING SHEET

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This invention has reference to sheet metal roofing and particularly to that type which comprises sheets with overlapping joints, the latter being nested in relation to each other whereby to effectually prevent leakage at the joints and sufficiently strong to withstand distortion or crushing as the result of any strains which may be imposed thereupon.

I am aware that the general type of sheet metal roofing of the type herein described is not broadly new, but I am not aware of a specific type of joint as herein claimed, which includes lapped and overlapping portions, the former comprising converging walls connected by a head portion, the specific construction of which lends the necessary supporting under structure for the overlapping portion to prevent distortion or crushing from any strains imposed thereon, and the latter having converging walls, one of which is non-complementary to a wall of the lapped portion and at the base of its wall is provided with a lateral or angular extension or rest braced by a rib of the lapped portion in the rear thereof, the relation of the two insuring an effective seal between the joints of the said lapped and overlapped portions.

That the invention may be more fully understood, reference is had to the accompanying drawing forming a part of this description, illustrating a preferred embodiment of the invention, in which:—

Fig. 1 is a perspective view broken away showing my improved sheet metal roofing; and

Fig. 2 is a cross-section at the joint of the lapped and overlapping portions of the sheets.

Like characters of reference denote corresponding parts throughout the figures.

The roofing in its assembled structure comprises a series of associated metal sheets 1 and each sheet along one edge is formed or provided with what is herein referred to as a lapped portion and at its opposite edge is formed or provided with what is herein referred to as a lapping portion, and it is the function of the lapping portion of a sheet to overlie the lapped portion of another sheet whereby to provide a water tight joint

or seal between the joints, and specifically, the lapped portion of a sheet provides the under supporting structure for the lapping portion of the other sheet, whereby these lapped and overlapping portions are made sufficiently strong to withstand distortion and crushing from any strains imposed thereon.

Referring now to the lapped portion along one edge of a sheet, it comprises the upwardly inclined converging walls 2 and 4, the latter terminating in the edge of the sheet in which the lapped portion is formed and the said walls 2 and 4 are united in the horizontal head portion 3. The base of the inclined wall 2 merges into the sheet proper and the said sheet at a point removed a suitable distance from said wall 2 is provided with a shallow inverted rib 8 between which and the said wall 2 is provided the trough or basin 9.

Referring now to the lapping portion at the other edge of the sheet, there are provided the upstanding inclined and converging walls 5 and 7 which unite in a horizontal head portion 6. The inclination of the wall 5 is complementary to the wall 4 of the lapped portion so that it may lie in juxtaposition thereto when sheets are assembled and the wall 7 is of non-complementary inclination to the wall 2 so that when the sheets are in assembled relation and the head portion 6 is in juxtaposed relation to the head portion 3, these lapped and overlapped portions are disposed in nested relation with the wall 7 in complementary relation with a wall of the rib 8, whereby to enclose or overlie the trough or basin 9. The wall 7 of the lapped portion constitutes the terminal of one edge of the sheet and is of angular formation or provided with the lateral extension 7a which lies in juxtaposition to the body of the adjoining sheet 1.

In nested relation, with the lapping portion of one sheet overlying the lapped portion of the other sheet, a seal is provided between the terminal wall 4 of the underlying sheet and the wall 5 when the latter and its sheet proper will form a union to prevent water or moisture from entering under the terminal wall 4; and since the walls 4 and 5 and the head portions 3 and 6 lie in juxtaposition an

efficient seal is provided therebetween. The rib 8 on the underlying sheet forms a stiffening member for supporting the lower portion of the wall 7 and the angular portion 7a of said latter wall not only gives additional strength to the terminal edge of the wall 7 but lends effectiveness as a seal, and in the event that such seal is weakened the trough or basin 9 will insure the effectiveness of such a seal between the edge of the terminal of the wall 7 and the joint formed therewith by the wall 2 of the lapped portion of the sheet.

Furthermore, the angular portion 7a of the lapping portion 7, as it is believed will be understood, will stiffen the terminal edge of the lapping portion and substantially prevent this edge of the lapping portion from curling, and as a result, break the seal between the lower portion of the wall 7 and the rib 8 lying thereunder.

What I claim is:

A roofing sheet composed of a body having one end portion provided with similar converging parts connected by a horizontal part and having the terminal of said end portion horizontal, the other end of the body being extended upwardly and horizontally to underlie and conformably engage one of the converging parts and the horizontal part of an adjacent sheet and having its horizontal part extended downwardly at an obtuse angle of approximately 105° and then extended horizontally and provided with an inverted V-part the outer side of which underlies and engages the other converging part of the first named end of the body, said terminal of the horizontal part of the first named end of the body being free and resting upon the horizontal part of the other end of the body.

In witness whereof, I have hereunto affixed my hand and seal this 9th day of March, 1931.

WILLIAM G. HARTEK.