May 7, 1946. A. ROUTT 2,399,891

ROOF

Filed March 7, 1944 2 Sheets-Sheet 1

Fig. 1.

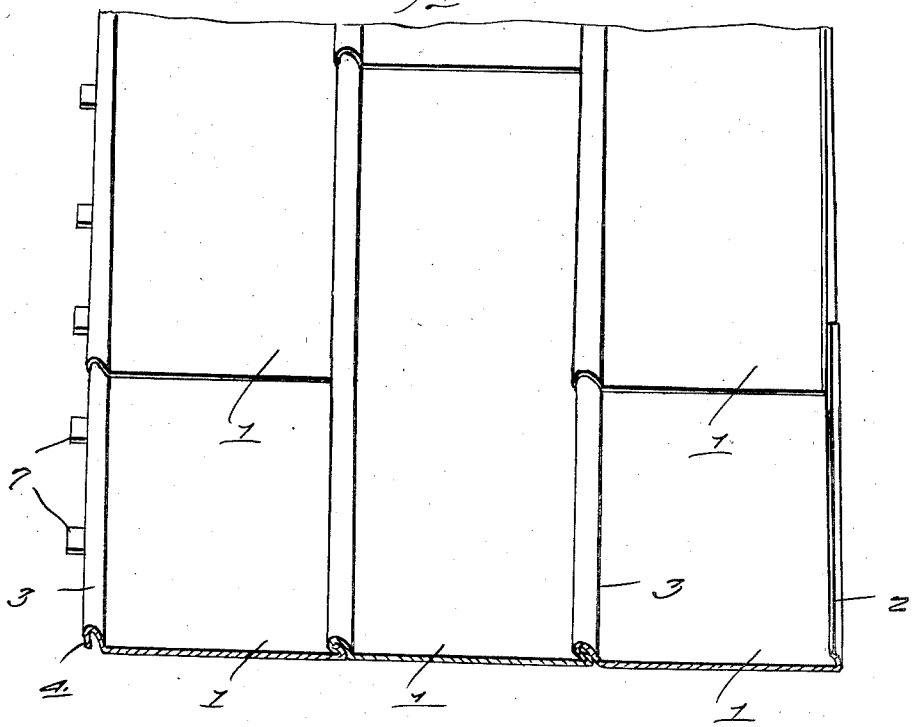
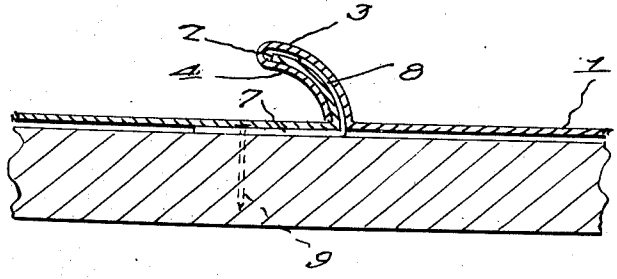


Fig. 3.



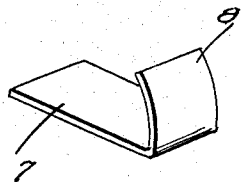


Fig. 6.

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ROOF

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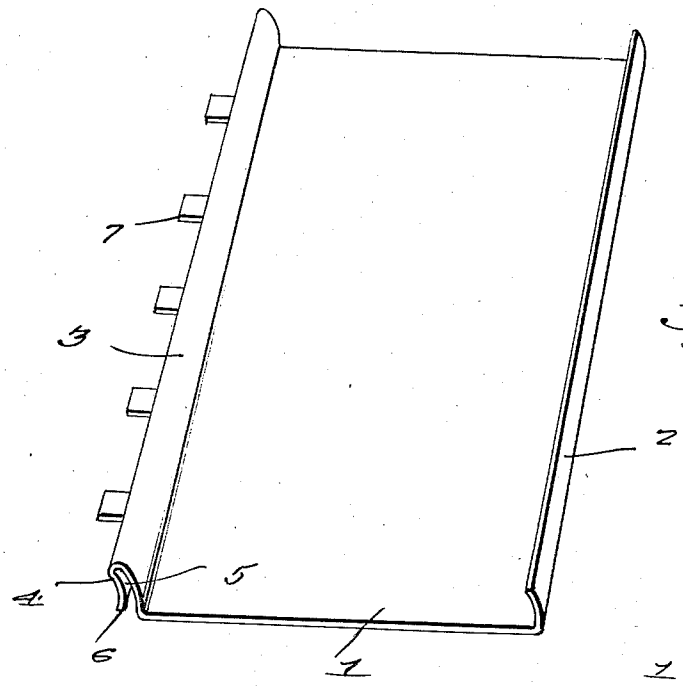


Fig. 2.

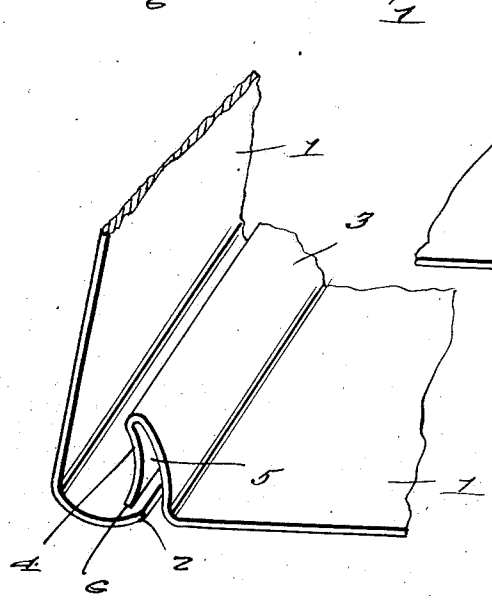


Fig. 4.

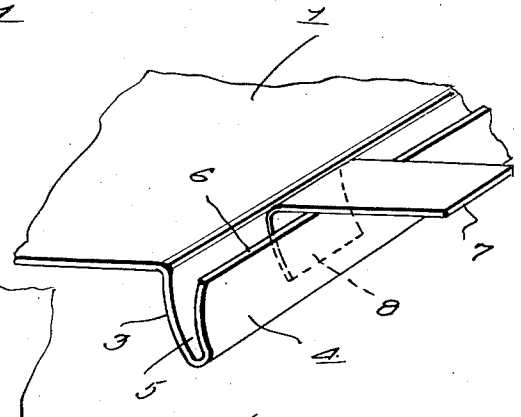


Fig. 5.

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Patented May 7, 1946

2,399,891

UNITED STATES PATENT OFFICE

2,399,891

ROOF

Arthur Routt, Dundas, Ill.

Application March 7, 1944, Serial No. 525,364

1 Claim. (Cl. 108—20)

The present invention relates to new and useful improvements in roofs of the interlocking lap seam type, and has for one of its important objects to provide a novel construction and arrangement for closing or sealing the seams in a manner to prevent the entrance of wind and water in addition to providing a strong connection.

Another very important object of the invention is to provide a roof of the aforementioned character comprising a unique anchoring means whereby there will be no exposed nails or holes.

Still another very important object of the invention is to provide a roof of the character described which will require a minimum of material and wherein the usual nail strips are eliminated.

Other objects of the invention are to provide a roof of the character set forth which will be comparatively simple in construction, strong, durable, attractive in appearance and which may be manufactured and applied at low cost.

All of the foregoing, and still further objects and advantages of the invention, will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a perspective view of a portion of a roof constructed in accordance with the present invention.

Figure 2 is a perspective view of one of the sheets.

Figure 3 is a cross sectional view through one of the seams of the finished roof.

Figure 4 is a perspective view, showing the method of connecting the sheets at the seam.

Figure 5 is a fragmentary bottom perspective view, showing the mounting of one of the anchor plates on the sheet.

Figure 6 is a detail view in perspective of one of the anchor plates.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a sheet 1 of metal or other suitable material. The sheet 1, which is elongated, may be of any desired dimensions. Rising from one of the longitudinal edges of the sheet 1 is an integral, inwardly or reversely curved flange 2.

Rising from the other longitudinal edge of the sheet 1 is an integral, outwardly curved ridge 3 which is higher than the flange 2. The ridge 3 has formed integrally with its upper edge a depending sub flange or lip 4 of equivalent arcuate cross section which defines, in conjunction with said ridge, a groove or channel 5. The sub flange or lip 4 is comparatively short and its lower marginal portion provides such outwardly curved lip 6.

Mounted at longitudinally spaced points beneath the ridge 3 are anchor plates 7 of suitable material, preferably metal. The anchor plates 7 each have a straight, flat tail which terminates, at one end, in upturned arcuate hook 8 which is engaged in the groove or channel 5. The straight tail portions of the anchor plates 7 may be riveted, welded, soldered or otherwise suitably fixed to the roof near the ridge 3 or, if desired, said portions 8 may extend upwardly and then downwardly in the groove 5 and secured to the sub flange lip 4. Also, the anchor plates 7 may, if necessary, be apertured to accommodate securing nails 9.

It is thought that the manner of laying or applying the roof will be readily apparent from a consideration of the foregoing. Briefly, when applying the roof in accordance with Figure 1 of the drawings, the mechanic works from his right toward his left, starting at the bottom of the roof, of course. The first sheet 1 is laid and the nails 9 are driven through the anchor plates 7. The next sheet to the left is then held in an angular position, as seen in Figure 4 of the drawings, to facilitate introduction of the flange 2 thereon into the groove or channel 5. When this has been done, this next sheet is swung downwardly and the flange 2 thereof is worked upwardly into the groove 5 where it seats between the ridge 3 and the sub flange 4. The shape of the groove 5 is such as to cause the flange 2 to frictionally bind therein. When putting on roofing of unbendable plastic or other material, no attempt should be made to bend or press the ridge over. If screws are used to fasten it on, the roofing may be removed, if desired, in an undamaged condition. However, when applying roofing of bendable metal or other material, the roof will be strengthened and improved if the ridge is bent or pressed over as shown in Figure 3 of the drawings. With a wooden mallet and a pair of pliers, or with some other suitable tool or equipment, the mechanic presses the lip 6 inwardly against the flange 2 and causes the lower edge of said lip to seat against said flange or on the sheet 1 immediately adjacent to said flange. The interlocked elements 3, 4 and 2 may be distorted or bent downwardly for squeezing and frictionally binding said element 2 between said elements 3 and 4. The seam or joint has now been completed and the mechanic, after driving

the nails 9 into the roof board, as in Figure 3, is ready to apply the next sheet. The mechanic, when applying the roofing, may also work from left to right. As seen in Figure 1 of the drawings, the splices or joints between the longitudinally adjacent sheets may be staggered. While the invention is intended primarily for roofing, it may also be used for siding and other purposes. Obviously the anchor plate 7 may be reversed to underlie the sheet 1 to facilitate nesting when the roofing material is stored or shipped.

It is believed that the many advantages of a roof constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

A roof of the character described comprising a plurality of sheets, each sheet including, on one marginal portion, an upwardly and outwardly extending ridge of arcuate cross section, a sub flange of equivalent arcuate cross section formed integrally with the upper edge of the ridge and extending downwardly and inwardly therebeneath, said sub flange forming an outwardly curved lip, said lip and the ridge defining a groove of substantially V-shaped tapered, cross section with adjacent sides of same curvature, each of the sheets further including, on its opposite marginal edge, an upwardly and inwardly extending flange also of the same arcuate cross section adapted to engage in said groove of an adjacent sheet, the ridge, the lip and the upwardly extending flange adapted for frictionally binding and sealing in said groove, and a plurality of spaced anchor plates each including a straight, perforated tail portion terminating with an upturned end of the same arcuate configuration engaging in said groove; and said tail portion secured to the roof board by nails or the like engaging said perforations.

ARTHUR ROUTT.