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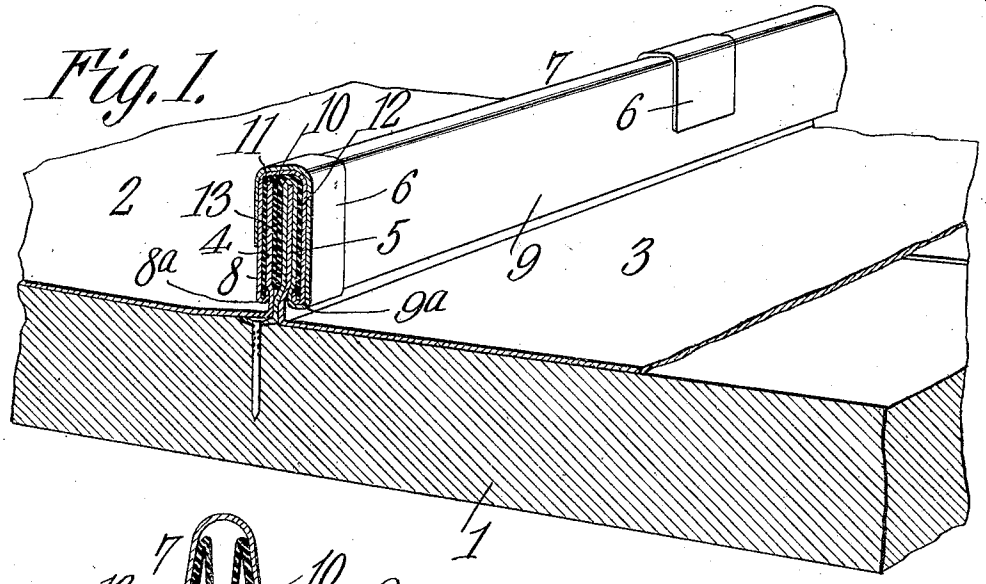
No. 877,133. PATENTED JAN. 21, 1908.

C. SPORNHAUER.

METALLIC ROOFING CONSTRUCTION.

APPLICATION FILED APR. 19, 1907.

Fig. 1.



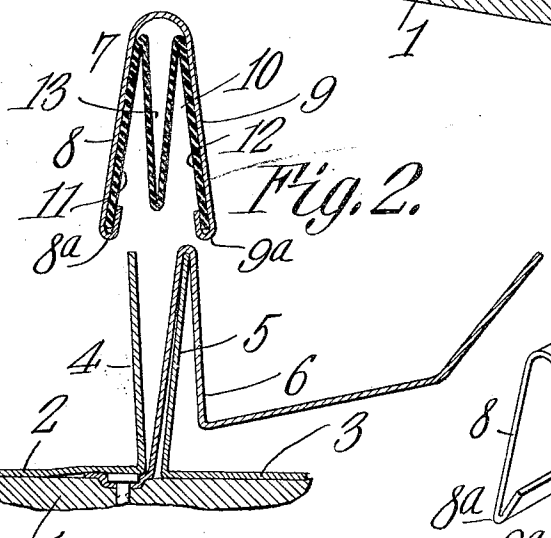
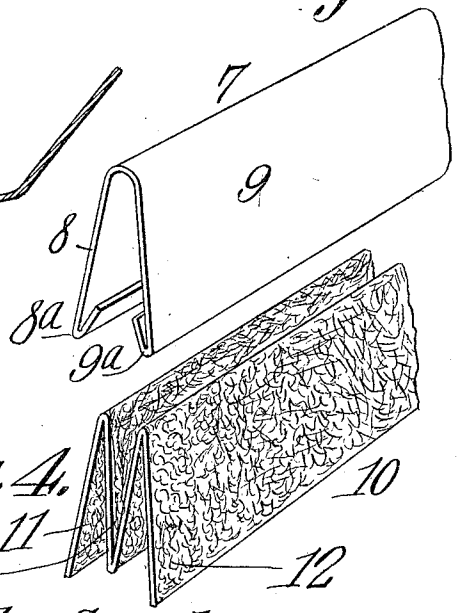


Fig. 2.

Fig. 3.



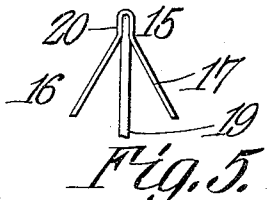


Fig. 5.

Fig. 4.

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CHARLES SPORNHAUER, OF CELINA, OHIO, ASSIGNOR OF ONE-HALF TO FRANK SPORNHAUER, OF CELINA, OHIO.

METALLIC-ROOFING CONSTRUCTION.

No. 877,133. Specification of Letters Patent. Patented Jan. 21, 1908.

Application filed April 19, 1907. Serial No. 369,141.

To all whom it may concern:

Be it known that I, CHARLES SPORNHAUER, a citizen of the United States, residing at Celina, in the county of Mercer and State of Ohio, have invented a new and useful Metal-Roof Construction, of which the following is a specification.

This invention relates to an improvement in sheet metal roof construction, more especially to the manner of making standing seams that shall be secure, water tight and easily separated and reformed. This is a most valuable property in roof construction as a defective plate or section can be removed from a roof, a new one substituted, and the seam closed as tightly as before.

The object therefore of this invention is to provide a labor saving means for closing standing seams of metal roofs which may be easily applied and as readily removed; and which shall make a perfectly secure joint, and at the same time anchor the roof to the wooden sheathing below, thereby preventing the roof from rattling and being blown off during the prevalence of very high winds.

In the accompanying drawings:—Figure 1 is a perspective view of a portion of a metal roof constructed in the manner hereinafter described. Fig. 2 is a cross section of a standing seam, the several parts being shown disconnected. Fig. 3 is a perspective view of a portion of the seam cap. Fig. 4 is a similar view of the cap packing. Fig. 5 is a cross sectional view of a modified form of cap.

Similar numerals of reference indicate the same parts in all the figures of the drawings.

The wooden sheathing of a roof, indicated by the numeral 1, is covered in the usual manner by strips or plates of sheet metal, such as tin. Two of such strips 2 and 3 are shown in the drawing with their respective adjacent edges 4 and 5 turned to an upright position and at a little greater angle than usual for a standing seam, so that when the plates 2 and 3 are placed in position, the upturned edges 4 and 5 will be separated at the top, as represented in Fig. 2.

Before the sheet 2 is placed against sheet 3, a number of anchor strips 6 of sheet metal are nailed to the sheathing 1 a suitable distance apart and bent over the upturned edge 4 or 5 of the roofing plates 2 or 3. The plate 2 is then crowded close against the plate 3 and a cap 7 placed over the upturned edges 4 and 5. The cap 7 is made from a strip of metal of any convenient length doubled upon itself lengthwise to bring the side edges 8 and 9 of the strip near each other. These edges are bent inwardly at 8^a and 9^a to form channel-ways in which are seated and clamped the edges of a piece of felt 10 or other suitable packing material which has been previously folded somewhat in the shape of the letter as M clearly represented in Fig. 2. The side folds 11 and 12 of the packing material as previously mentioned, are supported by the inwardly turned edges 8^a and 9^a of the cap sides 8 and 9 and rest against said sides. The central fold 13 of the packing extends downwardly between the side folds, and when the cap 7 is placed over the separated upturned edges 4—5, the central fold 13 of the packing passes between said upturned edges 4—5, while the outer folds 11 and 12 lie against their outer sides. After the cap 7 has been driven down on the upturned edges 4 and 5 as far as it will go, the several parts are clamped or pressed together by an ordinary cap squeezer or other tool, presenting then the appearance illustrated in Fig. 1.

The anchor strips 6 which at this time are sticking out between the ends 8^a or 9^a of the cap are then folded over the cap and bent down on the opposite side as clearly indicated in Fig. 1.

A standing seam, constructed as above described is strong, air tight, water tight, and, if asbestos is used, fire proof, and at the same time easily separable. The anchor strips through their attachment to the sheathing and to the seam, hold the metal roof closely against the sheathing and prevent it from rattling and from being blown off the house by a high wind. The packing prevents moisture from creeping up between the folds of the metal and protects the metal from rust.

A cheaper cap and one more quickly applied is represented in Fig. 5 and as there shown consists of a sheet of metal 15 doubled upon itself and clasping between the folded sides 16 and 17 near the bend 18, a sheet of packing 19 a little thicker than that used in the previous form of cap. The sides 16 and

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17 spread outwardly a short distance below the fold 20 to receive the upturned edges 4 and 5 of the metal plates 2 and 3.

Having thus described the invention what is claimed is:—

1. A metal roof seam comprising two sheets of metal each having an adjoining standing edge, a cap for covering said upstanding edges having channel ways formed at the bottom of each side, a folded packing strip supported in said channel ways and extending up into the cap, and adapted to separate said upstanding edges and the sides of the cap one from another, and an anchor strip extending from a fastening beneath the metal roofing over said cap.

2. A cap for metal roof seams comprising a folded sheet of metal having its lower edges turned inwardly to form channel ways, and a strip of folded packing within said cap and supported in said channel ways.

3. A packing strip for a metal roof seam to be used with a cap for covering the upturned ends of metal sheets, consisting of a strip of waterproof material doubled upon itself and then each side doubled again to form an M-shaped strip.

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

CHARLES SPORNHAUER.

Witnesses:

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ADELAIDE KENNEY.