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ROOF

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Fig. 1.

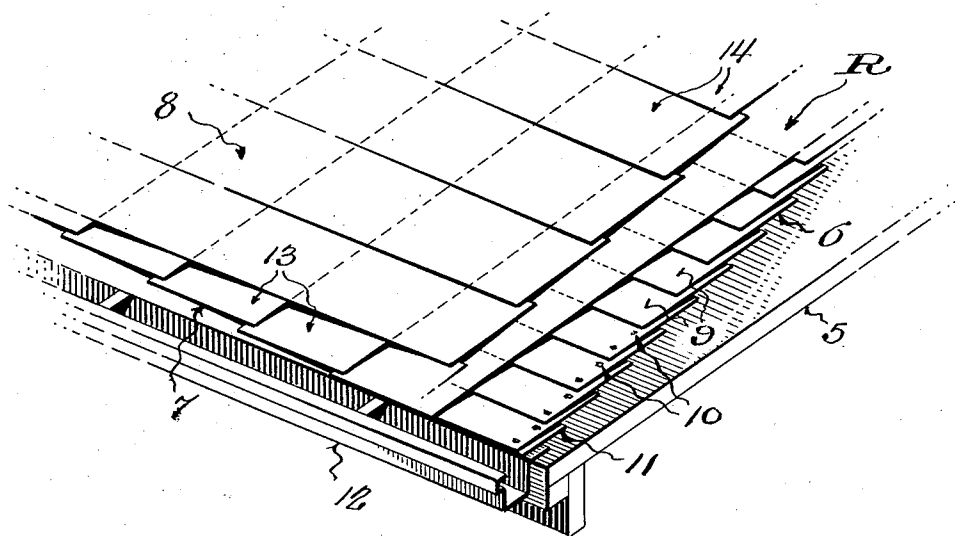
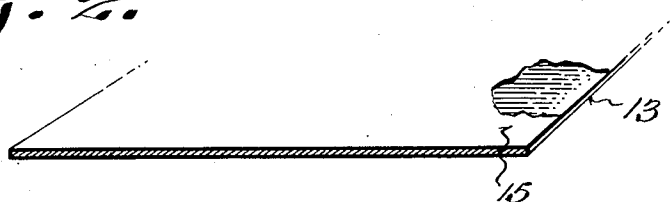


Fig. 2.



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6 Claims. (Cl. 108—13)

This invention appertains to buildings, and more particularly to an improved roof and method of laying the same.

Sheet copper is an ideal material for roofing, in view of its great wearing qualities and its ability to withstand the elements for years without being materially affected thereby.

However, considerable difficulty has been experienced in laying a satisfactory copper roof, in that the expansion and contraction of the metal is high. Hence, the roof has a tendency to break away at its seams or joints under certain temperature changes. Thus, even a newly laid copper roof is liable to leak where a considerable temperature change occurs.

It is, therefore, one of the salient objects of my invention to provide a novel method of laying a copper roof, which will not break away or crack under severe temperature changes, so that a weather-tight roof will be had under all conditions.

Another important object of my invention is to provide a copper or other metal roof formed from different layers of sheet metal, in which the various layers are all sweated or otherwise soldered together throughout their entire area, whereby to produce (in effect) a continuous one-piece roof, which will expand and contract as a single unit, so that all danger of breaks is eliminated.

A further object of my invention is to provide a copper or other metal roof formed from different layers of sheet metal with the different layers sweated together throughout their entire area, the sheets of one layer being arranged at an angle to the sheets of an adjacent layer, so that the overlapping portions of the sheets of the different layers will be out of alinement for structural strength.

A further object of my invention is to provide a metal roof formed from a series of different layers of metal strips arranged in overlapping relation, with means for firmly anchoring the initial layer to the roof bed, and the other layers together to form a unitary roof construction.

A still further object of my invention is to provide a novel method of laying a roof, which consists in: first, taking sheets of copper or other metal and coating the entire area of the sheets with a skin of solder or like material; second, laying the coated sheets in overlapping relation to form one layer; third, anchoring the sheets to the roof; fourth, laying a second layer of the sheets on the first layer and applying heat to firmly unite

the first and second layers together throughout their entire area by the solder.

With these and other objects in view, the invention consists in the novel construction, arrangement, and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawing, in which drawing:—

Figure 1 is a fragmentary perspective view of a roof constructed in accordance with my invention, the various layers of the roof being shown arranged in stepped relation to permit an understanding of the invention to be had.

Figure 2 is an enlarged fragmentary perspective view of one of the strips of the sheet metal, showing the same tinned on its opposite sides.

Referring to the drawing in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter R generally indicates my improved copper roofing applied to any preferred type of roof bed, or support, 5. This roof bed can be formed from wooden planks or in any other desired way, and thus the bed 5 forms no part of the present invention.

In accordance with my invention, I lay a series of layers 6, 7, and 8 of sheet metal strips to form the improved roof. While I have specified three layers, it is to be understood that two or any preferred number of layers can be provided without departing from the spirit of the invention, according to the quality of the roof desired, or the amount of money the purchaser wants to place on the roof.

The first layer 6 includes a plurality of sheet metal strips, 9, which are placed longitudinally of the roof in overlapping relation, and these strips are firmly secured in place to the roof bed 5 in any preferred manner, such as by the use of fastening elements 10.

In laying the first layer 6, I prefer to utilize a longitudinally extending half-strip 11 at the lower edge of the roof and over the gutter 12 of the roof. This gives an additional thickness at a needed point right at the start, it being noted that the full-width strip 9 is placed entirely over the half-width strip 11.

The second layer 7 also consists of sheet metal strips 13, which are arranged transversely of the roof in overlapping relation, as is clearly illustrated in Figure 1 of the drawing.

Where the third layer is used, sheet metal strips 14 are arranged at right angles to the strips 13 and longitudinally of the roof in overlapping relation. Thus, the strips 9 and the strips 14 of the

first and third layers 6 and 8 extend in parallel relation, and it is proposed to lay the strips of the third layer in such a manner that the overlapping portions thereof will be staggeredly related to the overlapping portions of the strips of the first layer.

If a fourth layer is to be laid, its strips will be arranged at right angles to the strips 14 of the third layer, and parallel with the strips 13 of the second layer 7.

Before the various strips of the layers are laid in place, the same are tinned on opposite sides with a thick skin of solder or the like 15, and after the second layer is placed on the first layer, heat is applied thereto so as to melt the solder 15 and firmly unite the strips 13 of the second layer together and to the strips 9 of the first layer 6.

When the strips 14 of the third layer are laid, heat is applied thereto, so as to melt the solder between the facing strips to firmly unite the strips 14 together and to the strips 13 of the second layer. This heat can be applied to the strips by means of an electrically heated roller or the like.

By this construction and method of laying, a substantially continuous and unitary metal roof is had, which will expand and contract uniformly, thereby effectively preventing cracking of the roof.

While I have specified that the various strips of the different layers extend at right angles to one another, it is to be understood that the strips of the layers can be run diagonally relative to one another.

The method of applying the sheet metal has been explained for roofing only, but it is to be understood that the principles of my invention can be applied in the forming of tanks, tubes, etc.

I do not limit myself as to the exact position of the various forms of the strips relative to one another. Thus the layer 6 could be utilized for the layer 8, and vice versa.

Changes in details can be made without departing from the spirit or the scope of this invention, but what I claim as new is:

1. The method of laying a sheet metal roof, which consists in: first, coating the opposite sides of metal strips with solder; second, laying the strips in overlapping relation and anchoring the strips to a roof; third, laying a second layer of

strips in overlapping relation on the first strips; and, fourth, applying heat to the second layer to melt the solder, so that the layers will be firmly united throughout their entire area.

2. The method of laying a copper roof, which consists in: first, coating the opposite sides of copper strips with solder; second, laying the strips in overlapping relation to form a roof layer and anchoring said layer to the roof; third, laying a second layer of the copper strips in overlapping relation at an angle to the strips of the first layer; and, finally, applying heat to the second layer to unite the first and second layers together throughout their entire area.

3. The method of laying a copper roof, which consists in: first, coating the opposite sides of sheet metal strips with solder; second, laying the strips in overlapping relation to form a first roof layer and anchoring said layer to a roof; third, taking additional coated strips and laying the same in overlapping relation at an angle to the strips of the first layer; fourth, applying heat to melt the solder to firmly hold the strips of the first and second layers together; fifth, taking additional coated strips and applying the same in overlapping relation at an angle to the strips of the second layer and parallel with the strips of the first layer; and, finally, applying heat to the strips of the third layer to firmly unite the strips of the third and second layers together throughout their entire area.

4. A roof comprising, a series of layers of sheet metal strips, and solder uniting the strips of the layers together through their entire area to form a unitary roof.

5. A roof comprising, a series of layers of sheet metal strips, with the strips of one layer extending at an angle to the sheets of another layer, and means soldering the sheets of the first and second layers together throughout their entire area.

6. A copper roof comprising, strips of sheet copper laid longitudinally of the roof in overlapping relation, means anchoring the sheets to the bed of the roof, additional sheet copper strips laid transversely of the roof in overlapping relation to form a second layer, additional sheets laid longitudinally of the roof in overlapping relation on the second layer, and solder connecting all of the sheets of all of the layers together throughout their entire area.

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