

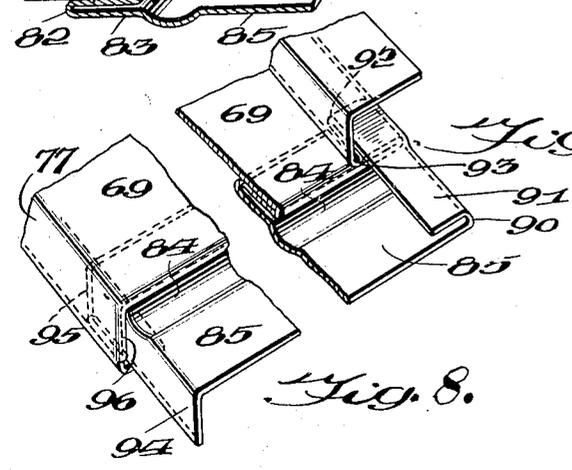
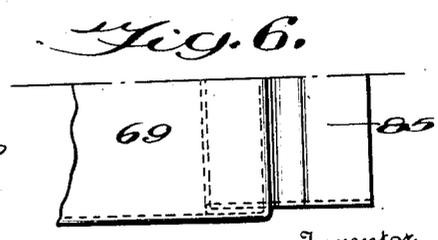
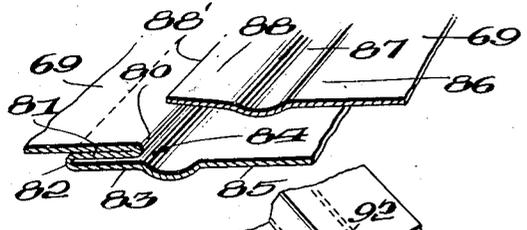
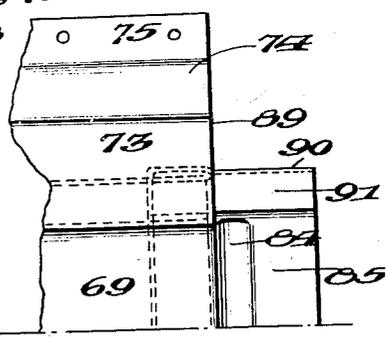
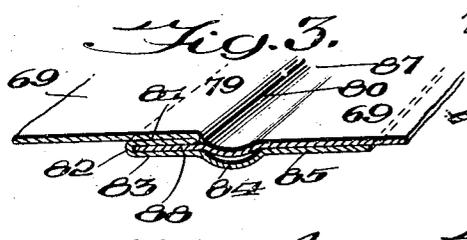
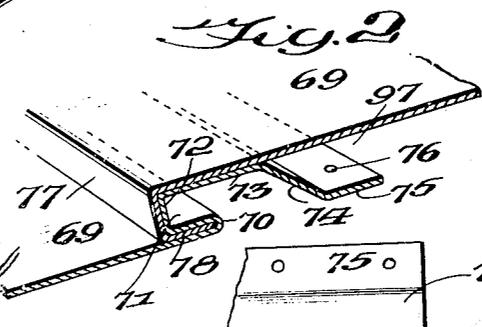
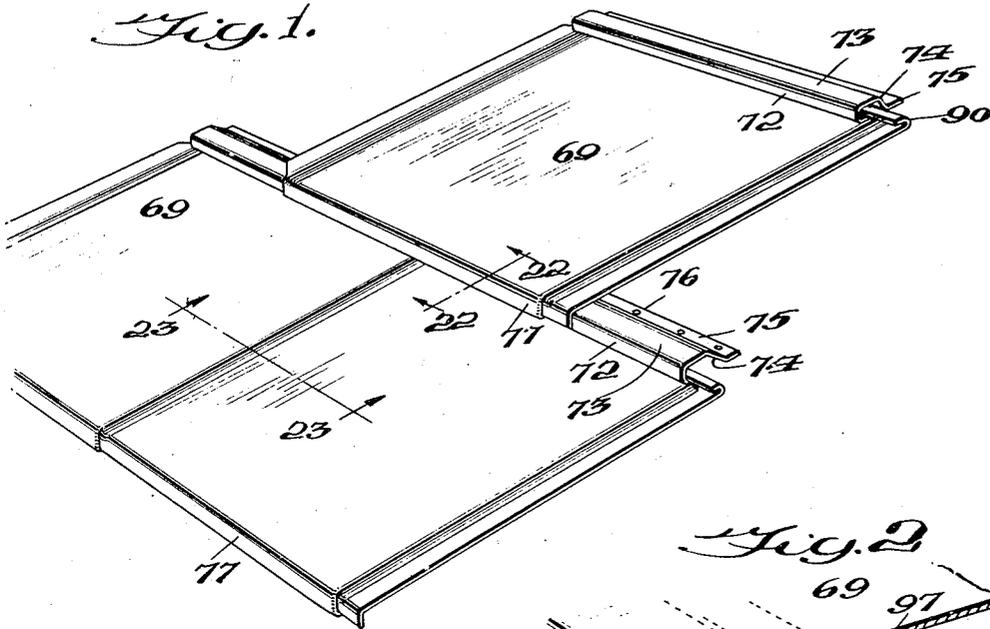
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2,188,454

ORNAMENTAL SHEET METAL SHINGLE FOR ROOFS AND WALLS

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2,188,454

ORNAMENTAL SHEET METAL SHINGLE FOR ROOFS AND WALLS

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8 Claims. (Cl. 108—17)

This invention relates to shingles made of sheet metal for use in covering roofs and in some cases the sides or walls of dwellings.

5 An object of the invention is to provide a shingle which is locked to adjacent shingles on both sides, as well as on the top and bottom, so as to make each shingle secure from damage by high winds of hurricane proportions, but the invention in its broadest aspect is not limited to the four sided lock, as it may include the top and bottom lock only.

10 Another object of the invention is to provide a shingle of the above type which, when properly set in place, prevents the entrance of water in its top, bottom, and sides from driving rain.

15 A further object of the invention is to provide a shingle which when assembled with other shingles of like type, will provide a very ornamental roof.

20 The invention has for its special object the production of "shadow effects".

An additional object of the invention is the provision of a shingle which, when assembled on a roof, provides a smooth, even surface.

25 Other objects will appear throughout the specification.

In the drawing:

30 Figure 1 is a perspective view showing several of the shingles in interlocked position;

Figure 2 is a view taken on the line 22—22 of Figure 1;

Figure 3 is a view taken on the line 23—23 of Figure 1;

35 Figure 4 is a view similar to Figure 3 but showing the adjoining edges of two shingles prior to being assembled;

Figure 5 is a detailed plan view of the upper right hand corner of one of the shingles;

40 Figure 6 is a detailed plan view of the lower right hand corner of one of the shingles;

Figure 7 is a perspective view of the structure shown in Figure 5; and

45 Figure 8 is a perspective view of the structure shown in Figure 6.

Figures 1 to 8, inclusive, illustrate the embodiment of my invention.

50 The shingles are intended to be laid upon a flat surface such as a roof covered with tar paper which has been laid upon the flat boards forming the base of the roof (not shown) but in some instances may be used with a stepped roof formed of sheeting boards such as shown at 10 in Figure 2.

55 In this form, 69 indicates the body portion or field surface of the shingle. The rear or upper

portion of this shingle makes a U-turn at 70, as shown in Figure 22, and has a forward extension 71, an upward extension indicated at 72, a rearward extension 73, a diagonal extension 74, and a nailing extension 75, which latter may be provided with holes 76 through which the usual nails are driven into the supporting surface located therebelow. The forward edge, as indicated at 77 extends downwardly, and has a rearwardly extending tongue 78 which fits within a space 10 provided between the upper part of the body portion 69 and the forward extension 71, as shown in Figure 2.

15 Referring to Figures 3 and 4, the right side edge 79 is provided with a U-turn 80, a side extension 81, a second U-turn 82, a bottom extension 83, which is provided with a depression or valley 84, and a tongue 85. The left side edge 86 is provided with a valley 87 and a tongue 88. The upper right hand corner, as shown in Figure 5, is provided with a cut-out portion 89. The extending tongue 85 is provided with a U-turn 90 and a forward extension 91.

20 Referring to Figure 7, the left side of the extension 91 is provided with a double U-turn 92, 93, where it joins with the forward extension 71. Tongue 85 is provided with a downward extension 94 and a double U-turn 95, 96, where it joins with the forward edge of the body portion.

30 One of the principal advantages of the third embodiment is to provide an air space 97 (Figure 2). This space forms an upright triangle, the apex being defined by a vertical line drawn from approximately the U-turn 70 up to the under side of the rearward extension 73. The base of said triangle would be the flat surface upon which the shingles are laid, and the hypotenuse would be roughly defined by the under surface of the rearward extension 73, and the under surface of the field 69 which lies directly above said rearward extension (see Figure 2).

40 The hypotenuse and base meet at approximately the U-turn 90, the under side of said U-turn resting upon the supporting surface. The forward edge 88' of the tongue 88 is tipped slightly upward so as to bind against the under portion of the side extension 81 to prevent water entering beneath said extension, and the troughs 87 and 84 are slightly spaced from each other, as indicated in Figure 3, to prevent water flowing 50 to the right as shown in that figure.

A shadow effect is produced by the upward extension 77.

55 Due to the triangular air spaces provided under each tile, this third embodiment should insure a

cooler interior for the house it forms the roof thereof. The locking joints at the top, bottom, and sides provide joints which become actually tighter during storms where the wind and water pressure is high, or where the wind reaches hurricane intensity. The trough-like joints forming the engaging means for the side edges, when viewed from a distance, give an appearance of a flat slab tile roof. The advantages therefore of the third embodiment are, that it may be laid on a flat surface, which is cheaper to construct than the shingle surface shown in Figure 2; an air insulating space is provided between the lower surface of the shingles and the upper supporting flat surface of the roof; the roof provides a shadow effect; and it tends to become tighter under strain, such as would be caused by high winds, either with or without heavy rainfall.

A very decorative roof may be formed by using any one of the embodiments illustrated and described. Moreover, such roof is waterproof and hurricane proof, as the shingles will remain on the roof as long as the roof remains on the house. Such shingles may be economically manufactured, as each of them is made from a single piece of metal, with the exception of the gore pieces used in the hips and valleys.

It is to be expressly understood that this invention is not to be limited to a top and bottom lock for sheet metal shingles, in combination with the specific side lock shown in Figure 3, and other figures, but may embrace a top and bottom lock for shingles per se, or a side lock, per se.

The foregoing description and drawing are understood to be for illustrative purposes only, and it is further understood that the invention is capable of various modifications. I desire to be limited, therefore, in the practice of my invention only to the extent as defined by the appended claims.

What I claim is:

1. A metal shingle having a field surface, a U-turn at the upper portion of said field surface, a forward extension connected to said U-turn and lying above and parallel to said field surface, an upstanding flange connected to said forward extension, the forward edge of said field surface having a downward extension and a rearward extension connected to said downward extension, said rearward extension lying below, parallel to, and spaced from said field surface, said shingle having side edge locking means on each side, each locking means being located below the level of said field surface and extending beneath the field surface of another shingle when said first named shingle is interlocked with the opposite side edge locking means of said other shingle and when the field surfaces of said shingles are lying in substantially parallel planes, and one side edge locking means being above the other side edge locking means of the other shingle, a portion of said first named U-turn and a portion of said forward extension lying in the same vertical plane as a portion of said side edge locking means.

2. A metal shingle constructed to provide an air space beneath the same, and a supporting surface, and having a field surface with means for connecting said shingle to the lower edge of another shingle, comprising an upstanding flange substantially at right angles to said field surface at its top, a rearward extension connected to said upstanding flange, a downwardly inclined surface extending from said rearward

extension, a nailing surface connected to said inclined surface, the lower forward edge of said field surface having means for connecting the same in overlapping relation to another shingle having said means first mentioned, said shingle having side edge locking means on each side, said locking means being located below the level of said field surface whereby when one side edge locking means of said shingle is interlocked with the opposite side edge locking means of another shingle, the field surfaces of said shingles will lie in substantially parallel planes, and said locking means of two shingles when interlocked including depressions which lie below the field surfaces of said shingles and between the field surfaces, whereby to produce the effect of a plurality of assembled tiles, a portion of said rearward extension lying in the same vertical plane as said side edge locking means.

3. A metal shingle constructed to provide an air space beneath the same and a supporting surface, and having a field surface with means for connecting said shingle to the lower edge of another shingle, comprising an upstanding flange substantially at right angles to said field surface at its top, a rearward extension connected to said upstanding flange, a downwardly inclined surface extending from said rearward extension, a nailing surface connected to said inclined surface, the lower forward edge of said field surface having a downward extension and a rearward extension adapted to be interlocked with at least one additional shingle having said means, said shingle having side edge locking means on each side, said locking means being located below the level of said field surface whereby when one side edge locking means of said shingle is interlocked with the opposite side edge locking means of another shingle, the field surfaces of said shingles will lie in substantially parallel planes, and said locking means of two shingles when interlocked including depressions which lie below the field surfaces of said shingles and between the field surfaces, whereby to produce the effect of a plurality of assembled tiles, a portion of said rearward extension lying in the same vertical plane as said side edge locking means.

4. A metal shingle constructed to provide an air space beneath the same, and a supporting surface, and having a field surface with means for connecting said shingle to the lower edge of another shingle, comprising an upstanding flange substantially at right angles to said field surface at its top, a rearward extension connected to said upstanding flange, a downwardly inclined surface extending from said rearward extension, a nailing surface connected to said inclined surface, the lower forward edge of said field surface having means for connecting the same in overlapping relation to another shingle having said means first mentioned, said shingle having side edge locking means on each side, said locking means being located below the level of said field surface whereby when one side edge locking means of said shingle is interlocked with the opposite side edge locking means of another shingle, the field surfaces of said shingles will lie in substantially parallel planes, and said locking means of two shingles when interlocked including depressions which lie below the field surfaces of said shingles and between the field surfaces, whereby to produce the effect of a plurality of assembled tiles, a portion of said rear-

ward extension lying in the same vertical plane as said side edge locking means.

5. A metal shingle constructed to provide an air space beneath the same, and a supporting surface, and having a field surface with means for connecting said shingle to the lower edge of another shingle, comprising an upstanding flange substantially, at right angles to said field surface at its top, a rearward extension connected to said upstanding flange, a downwardly inclined surface extending from said rearward extension, a nailing surface connected to said inclined surface, the lower forward edge of said field surface having means for connecting the same in overlapping relation to another shingle having said means first mentioned, one of said extensions having a tongue and another of said extensions having a recess into which said tongue fits, said shingle having side edge locking means on each side, said locking means being located below the level of said field surface whereby when one side edge locking means of said shingle is interlocked with the opposite side edge locking means of another shingle, the field surfaces of said shingles will lie in substantially parallel planes, and said locking means of two shingles when interlocked including depressions which lie below the field surfaces of said shingles and between the field surfaces, whereby to produce the effect of a plurality of assembled tiles, a portion of said rearward extension lying in the same vertical plane as said side edge locking means.

6. A metal shingle constructed to provide an air space beneath the same and a supporting surface, and having a field surface with means for connecting said shingle to the lower edge of another shingle, comprising a U-turn, a forward extension spaced from said field surface, an upstanding portion and a rearward extension, and means for attaching said rearward extension to a supporting surface; the lower forward edge of said field surface having a downward extension and a rearward extension adapted to interlock with at least one additional shingle having said means first named, said shingle having side edge locking means on each side, said locking means being located below the level of said field surface whereby when one side edge locking means of said shingle is interlocked with the opposite side edge locking means of another shingle, the field surfaces of said shingles will lie in substantially parallel planes, and said locking means

of two shingles when interlocked including depressions which lie below the field surfaces of said shingles and between the field surfaces, whereby to produce the effect of a plurality of assembled tiles, a portion of said first named U-turn and a portion of said forward extension lying in the same vertical plane as a portion of said side edge locking means.

7. A metal shingle having a field surface, said shingle having locking means on each side, each locking means being located below the level of said field surface and extending beneath the field surface of another shingle when said first named shingle is interlocked with opposite side edge locking means of said other shingle, the field surfaces of said shingles lying in substantially parallel planes, and the one side edge locking means being above the other side edge locking means, one side edge locking means of each shingle having at its top a U-turn portion, and said field surface having at its bottom an inturned flange substantially parallel to said field surface adapted to interlock with the U-turn portion of a tile located next below the tile first mentioned, said top U-turn portion having some of its area overlying a part of said side locking means.

8. A metal shingle having a field surface, said shingle having locking means on each side, each side of said locking means being located below the level of said field surface and extending beneath the field surface of another shingle, when said first-named shingle is interlocked with the opposite side edge locking means of said other shingle the field surfaces of said shingles will lie in substantially parallel planes, and the one side edge locking means will be above the other side edge locking means, one side edge locking means of each shingle having at its top a U-turn portion, and said field surface having at its bottom an inturned flange substantially parallel to said field surface adapted to interlock with the U-turn portion of a tile located next below the tile first-mentioned, and said locking means including depressions which lie below the field surfaces of two side-by-side interlocked shingles and spacing the said field surfaces from each other, a depression of one shingle lying below that of another shingle, whereby to produce the effect of a plurality of assembled tiles, said top-U-turn portion having some of its area overlying a part of said side locking means.

LEO I. BRADDOCK.