

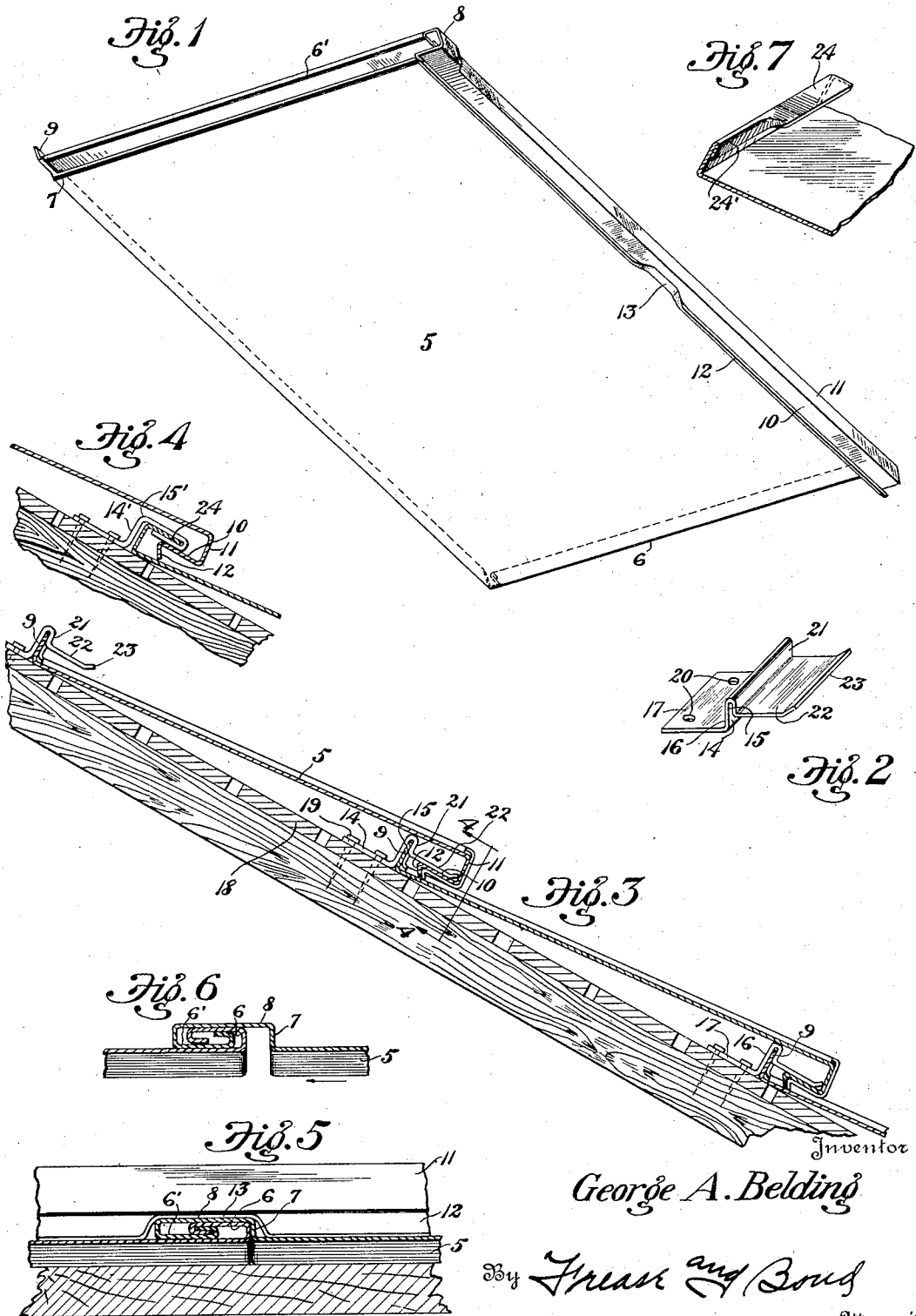
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G. A. BELDING

METAL SHINGLE

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George A. Belding

By *Freese and Bond*

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE A. BELDING, OF BILLINGS, MONTANA.

METAL SHINGLE.

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To all whom it may concern:

Be it known that I, GEORGE A. BELDING, a citizen of the United States, residing at Billings, in the county of Yellowstone and State of Montana, have invented new and useful Improvements in Metal Shingles, of which the following is a specification.

The invention relates to shingles made of sheet metal; and the object of the improvement is to shape a shingle and provide a clip for securing the upper end of one shingle to a roof and also for engaging the lower end of an overlapping shingle and securing it to the roof.

A further object of the improvement is to save the extra length of material used in well known methods of overlapping the ends of shingles and securing the same to a roof; and to this end the invention involves the use of an upturned flange on the upper end of a lower shingle with an underturned L-flange on the butt end of an upper shingle, and a clip secured to the roof extending over the upturned flange and provided with a protruding tongue under which the L-flange of the upper shingle is engaged.

The invention may be embodied in a shingle and a clip shaped as shown in the accompanying drawings, forming part hereof, in which—

Figure 1 is a detached perspective view of the improved shingle;

Fig. 2, a detached perspective view of the improved clip;

Fig. 3, a fragmentary section illustrating the application of the improved shingle and clip to a roof, showing a joint between the overlapping ends of the shingles;

Fig. 4, a fragmentary section, showing a modified form of the overlapping end joint;

Fig. 5, a fragmentary section, as on line 4—4, Fig. 3, showing a side joint of the shingle;

Fig. 6, a fragmentary section, showing the method of assembling the side joint; and

Fig. 7, a fragmentary perspective view showing the use of an upturned L-flange on the upper end of a shingle.

Similar numerals of reference indicate corresponding parts throughout the drawings.

The improved shingle 5 is made of sheet metal and may be provided with an open folded hook flange 6 along one side, and is off-set as at 7 at the other side to form a raised rib 8, which is provided with an open

folded hook flange 6'. The open flanges and their hooks are adapted to interengage by sliding endwise one within the other, as shown in Fig. 5; and they may also be engaged sidewise by springing one flange within the other to join the sides of the shingles together, as shown in Fig. 6, and when so joined the body portions of adjoining shingles lie in the same plane, as shown in Fig. 5.

The upper end of each shingle is provided with an upturned flange 9, which may be formed at a normal angle as shown, and the lower end of each shingle is provided with an underturned L-flange 10, the stem 11 of which may form a square or butt end of the shingle, and the underturned edge of which may be provided with a downturned lip 12, which is preferably inclined outwardly so as to bear upon a lower shingle at an acute angle, as shown in Fig. 3. The lip 12 is bent upward against the L-flange, at certain places, as at 13, to fit over a raised rib 8, as at the side joints of lower shingles.

The improved clip 14 is likewise made of sheet metal and is bent along a median line and may form an inverted U-shaped socket 15 for receiving and fitting over the upturned flange 9 on the upper edge of a shingle, as shown in Fig. 3, or may extend straight from the bend 15', as shown in Fig. 4.

One side 16 of the socket 15 is made substantially the same height as the upturned flange and is provided with a securing flange 17 adapted to lie flatwise upon a roof 18, and to be secured thereto as by nails 19 driven through apertures 20 in the flange. The other side 21 of the socket is made of less height than the upstanding flange 9, and is provided with a tongue flange 22 extending over and at a free interval above the body of a lower shingle, and may be inclined toward the same; which tongue flange is preferably provided with an upwardly inclined lip 23 on its free end.

When an upturned L-flange 24 is used, as shown in Figs. 4 and 7, a modified form of clip 14' may be used with a tongue flange extending straight from the bend 15' and thence by a return bend under the L-flange; or the L-flange 24 may be folded flat at certain places, as at 24' to accommodate the socket of an ordinary clip 14.

In applying the shingles to a roof, a clip is engaged over the upturned flange 9 on the

upper end of a lower shingle and is then secured to the roof by nails or the like driven through its securing flange; after which the L-flange of an upper shingle is engaged under the tongue flange 22 of the clip by sliding upward under the same; and the parts are preferably shaped so that the tongue flange must be deflected upward by the entrance of the L-flange under the same, so as to clamp the L-flange tightly against the body of the lower shingle, the upwardly inclined lip 23 being provided on the tongue flange to facilitate the entrance of the L-flange thereunder.

By these means the overlapped ends of the shingles are both secured to the roof by the same clip, and the bearing of the downwardly inclined lip 12 on the body of a lower shingle makes a close contact therewith and stops any water which may flow upward under the lower end of the butt shingle.

I claim:—

1. A sheet metal shingle or the like having an upturned flange on one end and an underturned L-flange on the other end provided with a downturned, outwardly inclined lip for engagement with the next lower shingle and a clip having a socket engaging over the upturned flange on one side and with a flange on one side secured to a roof and a tongue flange on the other side engaging the L-flange of an overlapping shingle, there being an upwardly inclined lip on the engaging tongue of the clip.

2. A sheet metal shingle or the like having an upturned flange on one end and an un-

derturned L-flange on the other end, and a clip having a median bend engaging over the upturned flange with a flange on one side secured to the roof and a tongue flange on the other side engaging the L-flange of an overlapping shingle.

3. A sheet metal shingle or the like having an upturned flange on one end and an underturned L-flange on the other end, and a clip having a median U-shaped socket engaging over the upturned flange on one shingle with a flange on one side secured to a roof and a tongue flange on the other side engaging the L-flange of an overlapping shingle.

4. A sheet metal shingle or the like having an upturned flange on one end and an underturned L-flange on the other end, and a clip having a median bend engaging over the upturned flange on one shingle with a flange on one side secured to a roof and a tongue flange on the other side engaging the L-flange of an overlapping shingle, there being a downwardly inclined lip on the edge of the L-flange.

5. A sheet metal shingle or the like having an upturned flange on one end and an underturned L-flange on the other end, and a clip having a median bend engaging over the upturned flange on one shingle with a flange on one side secured to a roof and a tongue flange on the other side engaging the L-flange of an overlapping shingle, there being an upwardly inclined lip on the engaging tongue of the clip.

GEORGE A. BELDING.