(No Model.)

W. W. TURNER.

METAL ROOFING.

No. 573,937. Patented Dec. 29, 1896.

Fig. 1.

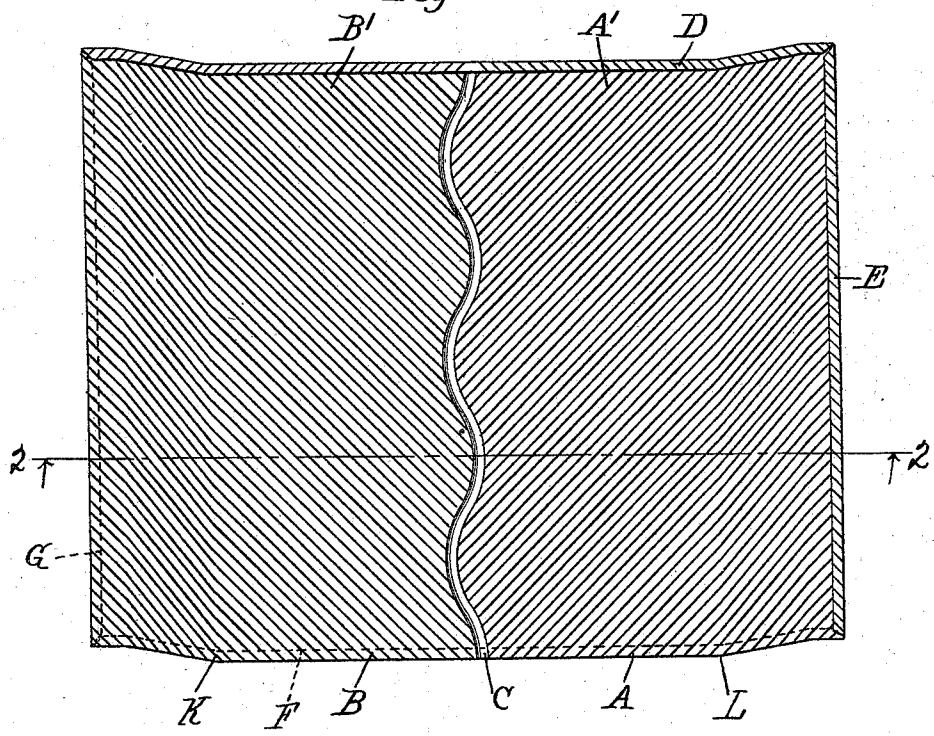
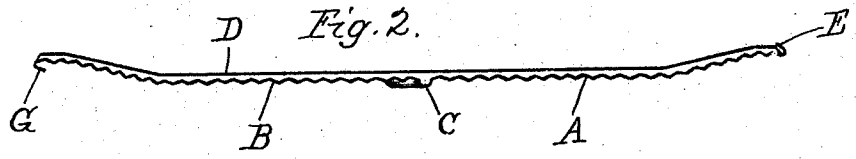


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM W. TURNER, OF CHICAGO, ILLINOIS.

METAL ROOFING.

SPECIFICATION forming part of Letters Patent No. 573,937, dated December 29, 1896.

Application filed April 30, 1896. Serial No. 589,808. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. TURNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Metal Roofing, of which the following is a specification.

My invention relates to sheet-metal roofing for tin, though some features of the invention might be applicable to other than sheets of metal.

It has for its object to provide a plate, particularly a sheet-metal plate adapted for roofing, and particularly adapted for roofing where such plates are to be laid on a roof approximately flat.

It also has for its object to provide such a plate as that the water will be most thoroughly and completely drained therefrom and thereby.

It also has for its object to provide a plate so organized and constructed as that when the metal is expanded and contracted it will not lose its normal shape and will therefore not be noisy, as is the case with some kinds of metal roofing, and will not furnish or provide little places for water to collect.

My invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of a plate, and Fig. 2 is a cross-section through such plate.

Like parts are indicated by the same letter in each figure.

The plate or sheet of metal is composed of the two portions A and B, which are provided each with diagonal grooves or ways A′ B′. These grooves or ways are oppositely inclined, as indicated, and join or terminate in a central groove C, which is serpentine in shape, and the whole is preferably formed or stamped or rolled out of a single sheet of metal. Each plate preferably has the upwardly-turned lip D at the top and a like lip E at one side, while on the bottom it has the lip F, and on the opposite side has the lip G. The plate is preferably slightly creased or bent at its sides at K and L, and is adapted along its side edges to interlock with the next plate and then to be secured to a transverse bar or piece which supports the slightly-lifted edges above the plane of the body of the plate. The plate is also preferably inclined longitudinally when in position. The plates are easily interlocked and the edges then forced down upon each other, so as to make a continuous and secure roof.

The use and operation of my invention are as follows: It is found that with plates of this general character or plates designed for roofing as heretofore constructed there is a continual action of expansion and contraction, and it appears also that this action varies and that the plate will sometimes expand more than it will contract, and the result is that with every such action a certain amount of noise is made and also the plates are bent, warped, and distorted, so as to endanger their connecting points or lines and also so as to make hollows or depressions into which the water passes and where it is accumulated. The construction here shown, particularly the diagonal grooves or ways rolled in the metal, results in preventing this contraction and expansion, or rather results in preventing the disastrous consequences thereof. These grooves being placed diagonally, the expansion of the plate is taken up by the side portions between the edge of the plate and the creases K and L, and when the plate recontracts it assumes its normal position. Neither is the plate ruptured or injured along the line where the water is carried off or the groove through the metal of the plate, for there the groove is placed in serpentine form and with the action of expansion the plate can give without rupturing this groove or trough, which it could not well do if the trough were made of a straight line. The arrangement which I have shown also provides for carrying off the water very readily. The water is all turned by the grooves toward the trough or serpentine way. There it is discharged, and there it is necessarily carried off into the overflow-pipe from the roof or other conduit.

I claim—

1. A roof-plate comprising a body having oppositely-inclined diagonal grooves with a central trough into which the grooves open.

2. A roof-plate comprising a body with oppositely-inclined grooves and a serpentine trough into which the grooves open.

3. A roof-plate comprising a body having oppositely-inclined diagonal grooves and being bent up slightly near the sides.

4. A roof-plate comprising a body having oppositely-inclined diagonal grooves and being bent up slightly near the sides, and having a serpentine trough or way into which the grooves open.

WILLIAM W. TURNER.

Witnesses:
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