

J. P. TODD.
METALLIC SHINGLE.
APPLICATION FILED MAR. 30, 1910.

993,281.

Patented May 23, 1911.

Fig. 1.

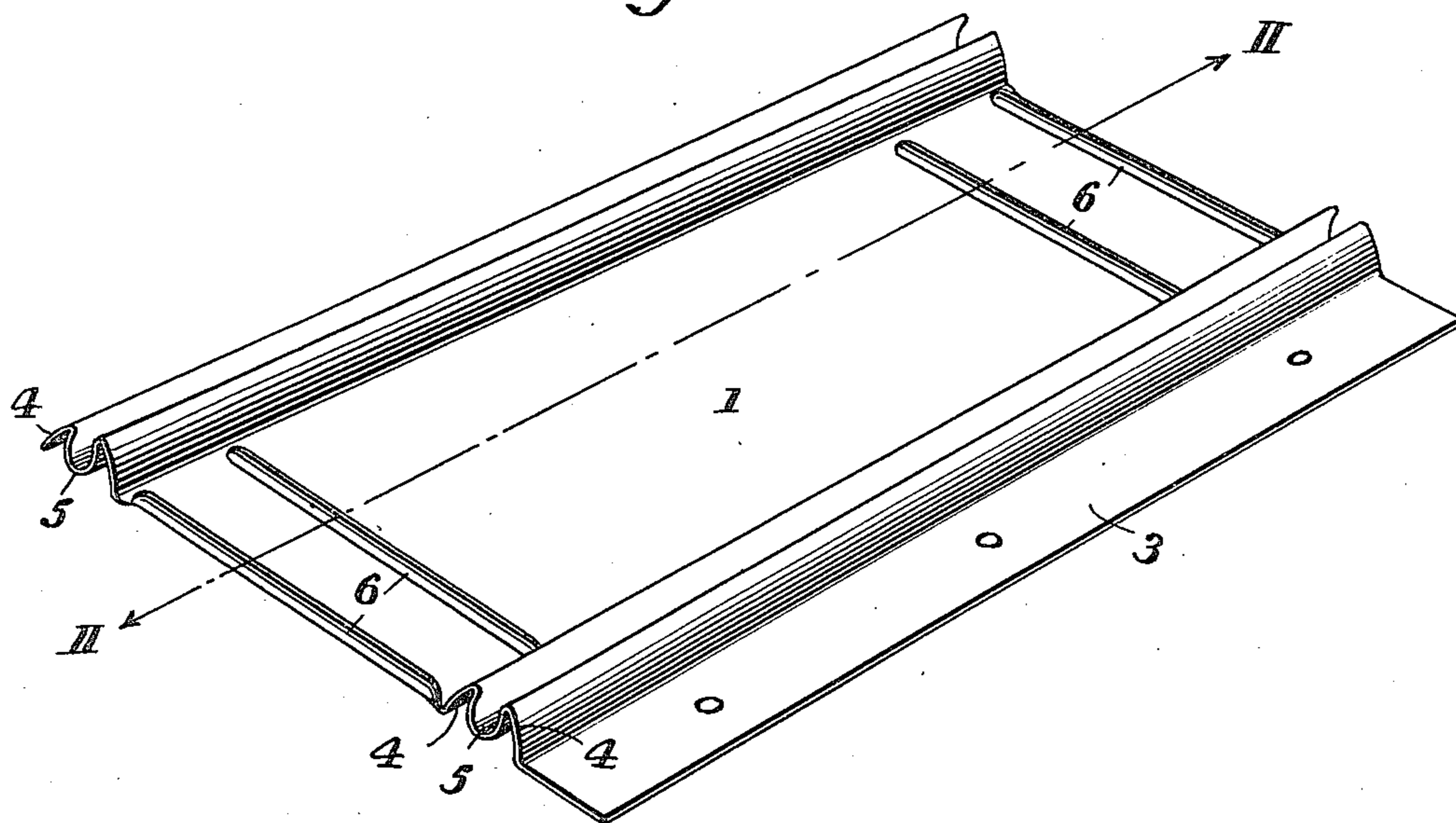


Fig. 2.

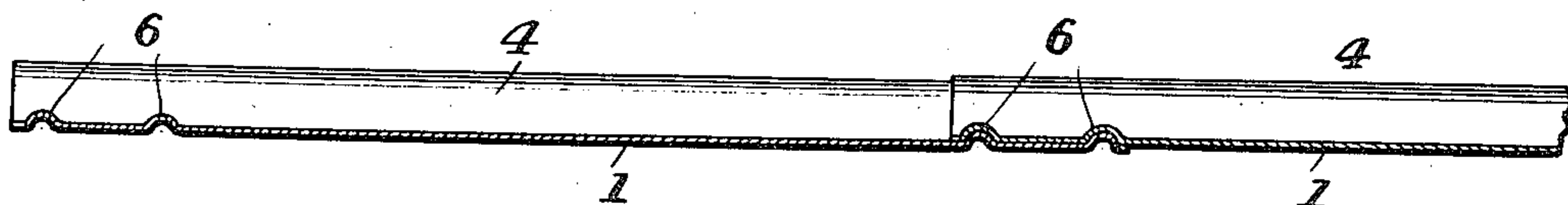


Fig. 3.

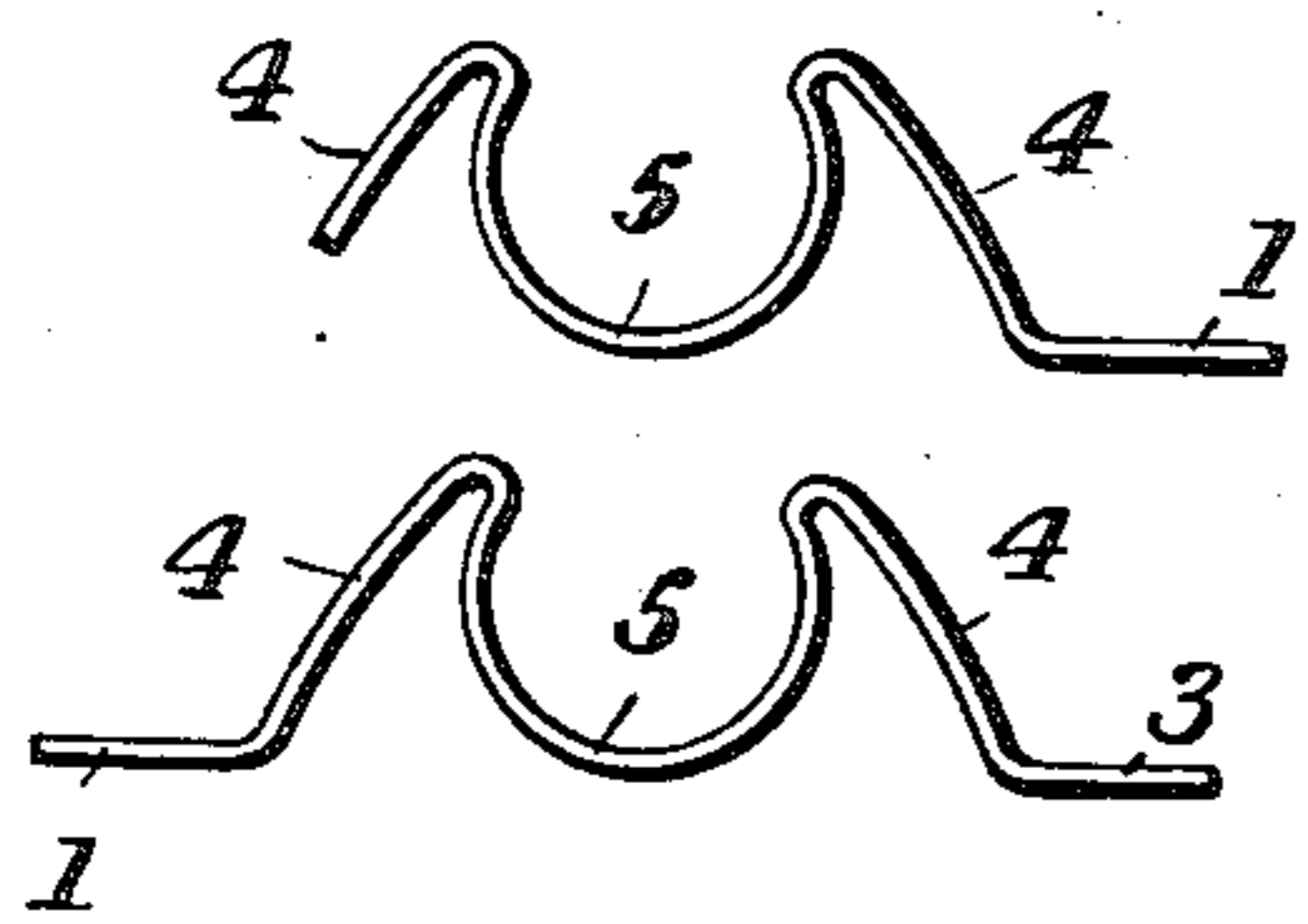


Fig. 4.

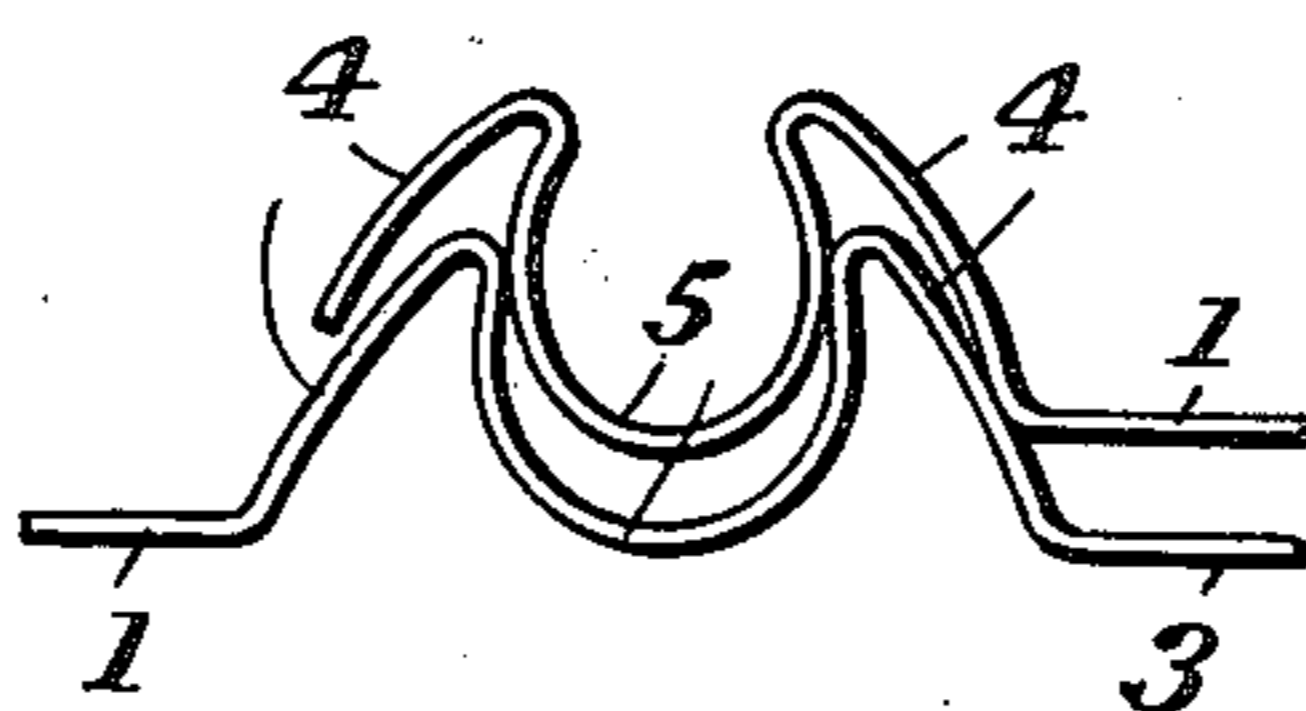
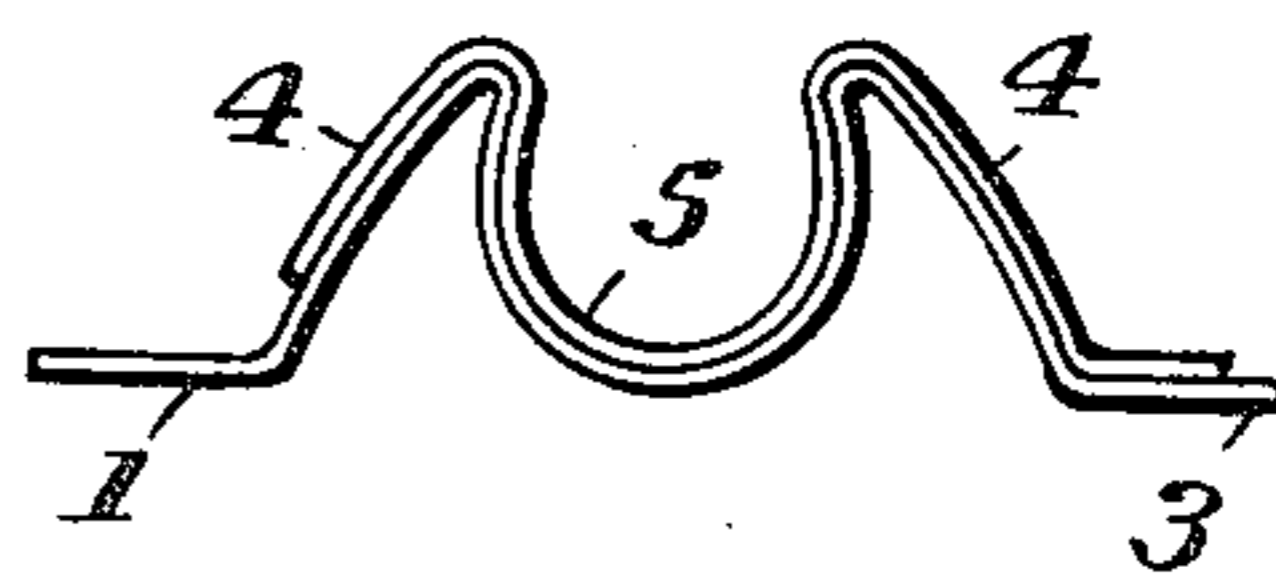


Fig. 5.



Witnesses

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by

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UNITED STATES PATENT OFFICE.

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METALLIC SHINGLE.

993,281.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN P. TODD, a citizen of the United States, residing at Anderson, in the county of Anderson and State of South Carolina, have invented new and useful Improvements in Metallic Shingles, of which the following is a specification.

My invention relates to metallic shingles or roofing plates designed to be fitted and nailed to the sheathing, and provided with interlocking features which form a watertight roof without soldering or crimping of seams.

It is the purpose of my invention to provide a shingle with marginal attaching ribs which may be forced or sprung over the corresponding ribs of the adjacent shingles to securely lock the same together, the opposite ends being symmetrical so that it will present the same appearance when reversed.

The peculiar advantages possessed by my improved shingle construction will be better understood from the following description in connection with the accompanying drawings, in which—

Figure 1 is a top perspective view of my improved shingle. Fig. 2 is a longitudinal section on the line II—II of Fig. 1, with the addition of an associated or contiguous shingle illustrating the lap-joint feature. Fig. 3 is an enlarged detail end elevation of one side of one of the shingles and the opposite side of a contiguous shingle, showing the locking ribs in position to be forced together. Fig. 4 is a view somewhat similar to Fig. 3, but illustrating the position of the shingles during the operation of joining their locking ribs, and showing the reciprocal action between the uniting members; namely, the wedging effect, bringing about the spreading and contracting actions of the two respectively. Fig. 5 illustrates the position of the two members after they have been sprung into interlocking engagement.

The shingle 1 may be made of the usual sheet metal, such as tinned sheet iron, and is provided upon opposite sides with longitudinal locking ribs by which adjacent shingles are securely fastened together. The peculiar form of these locking ribs in my present invention possesses certain important features which are especially advantageous in the class of roofing to which this belongs. The shingles can be laid very rap-

idly, and can be secured by merely superposing the matching ribs and forcing them into spring-pressed engagement. The shape of the engaging parts is such that the shingles will be held together with great tenacity, requiring considerable force to separate them.

The interlocking members upon each side of the shingle are exactly alike, except that a nailing flange 3 is provided upon one side. Each locking member comprises a pair of inwardly directed ribs or ridges 4, 4, separated by an arcuate piece 5, forming a groove or channel having a contracted opening bounded by the apices of the ribs.

In order to lock adjacent shingles together, the locking member of one shingle is brought over and in alinement with that of the other shingle in the position shown in Fig. 3, and the upper shingle is then pressed downwardly, the ribs of the lower shingle engaging the outer walls of the channel member of the upper shingle and causing a reciprocal action, the expansion of the lower member and the contraction of the upper member, as shown in Fig. 4, the parts finally springing back with the parts coinciding in the manner shown in Fig. 5. The parts, therefore, constitute tongue and groove locking members which are securely held in engagement under spring pressure.

Inasmuch as the ends of my shingle are alike, the shingles may be laid from left to right or vice versa, and may be started from the center or any other desirable point in the roof and may be laid in both directions, thus resulting in a great saving in both labor and materials. This is especially advantageous in roofing houses constructed with hips, valleys, gables, etc.

The double ribs or ridges of each locking member furnish an exceedingly stiff and rigid reinforcement to the shingle throughout its entire length upon each side, and the combined elements of oppositely directed wedge-shaped ribs united by the arcuate channel member form a locking member which is not easily forced out of shape or injured in shipment, which is an important feature in sheet-metal structures.

I have shown the shingles provided with transverse ribs 6 at each end, which overlap corresponding ribs of the adjacent shingle, as shown in Fig. 2. These serve to pre-

vent rain and snow from beating up under the lap of the plates, but are not absolutely essential.

Any ornamental figure may be stamped upon the plate, if desired, but in this case the figure should be symmetrical and the same at either end so that the shingle may be reversed as previously described.

I have illustrated and described somewhat in detail a particular construction, but it will be understood by those skilled in this art that changes may be made in the details of construction without departure from the spirit of my invention, for which I claim—

1. A reversible metallic shingle having upon either side a resilient locking device comprising a pair of upstanding oppositely directed ribs and a channel member connecting said ribs and having a contracted opening.

2. In a shingle of the class described, the combination with a sheet metal shingle, of grooved members, each formed by a set of double convergent walls having their apexes inclined toward one another to form a contracted mouth for the said grooved member.

3. In a shingle of the class described, a body of flexible material having a lateral strip extension, oppositely directed arcuate walls springing from said body and said extension and having return continuations formed to provide an elongated channel having a contracted opening.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN P. TODD.

Witnesses:

C. W. MCGEE,
JAS. N. PEARMAN.