

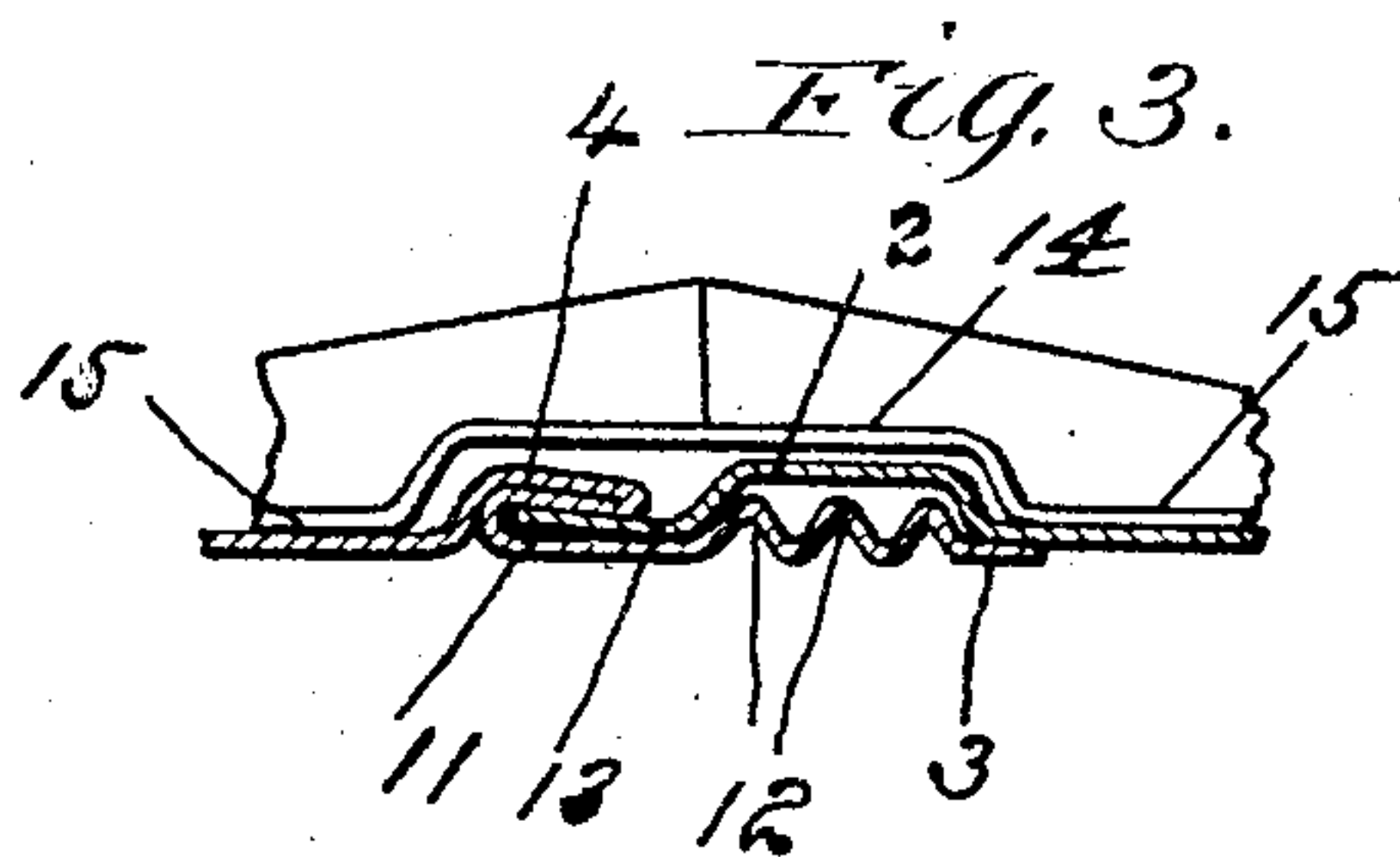
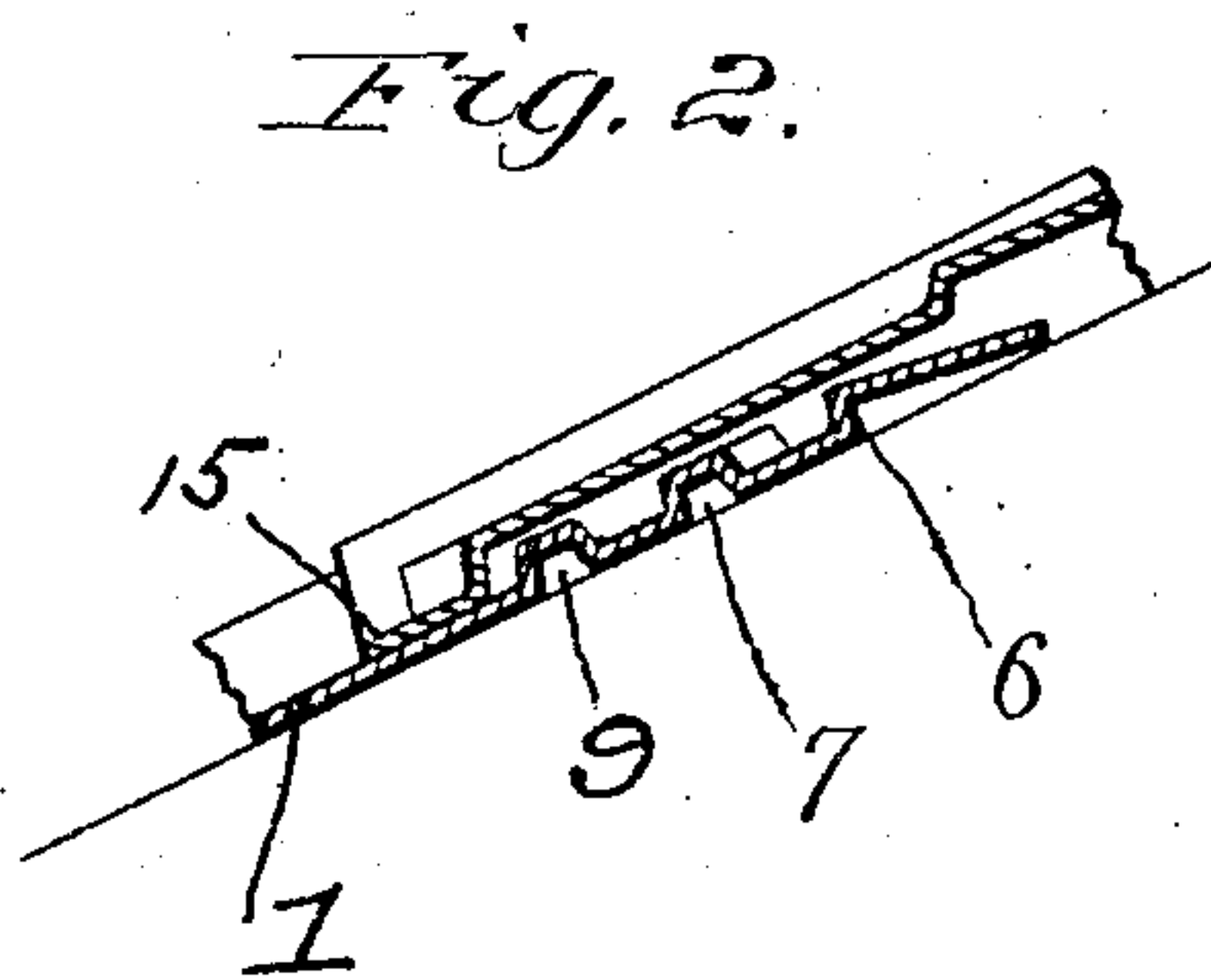
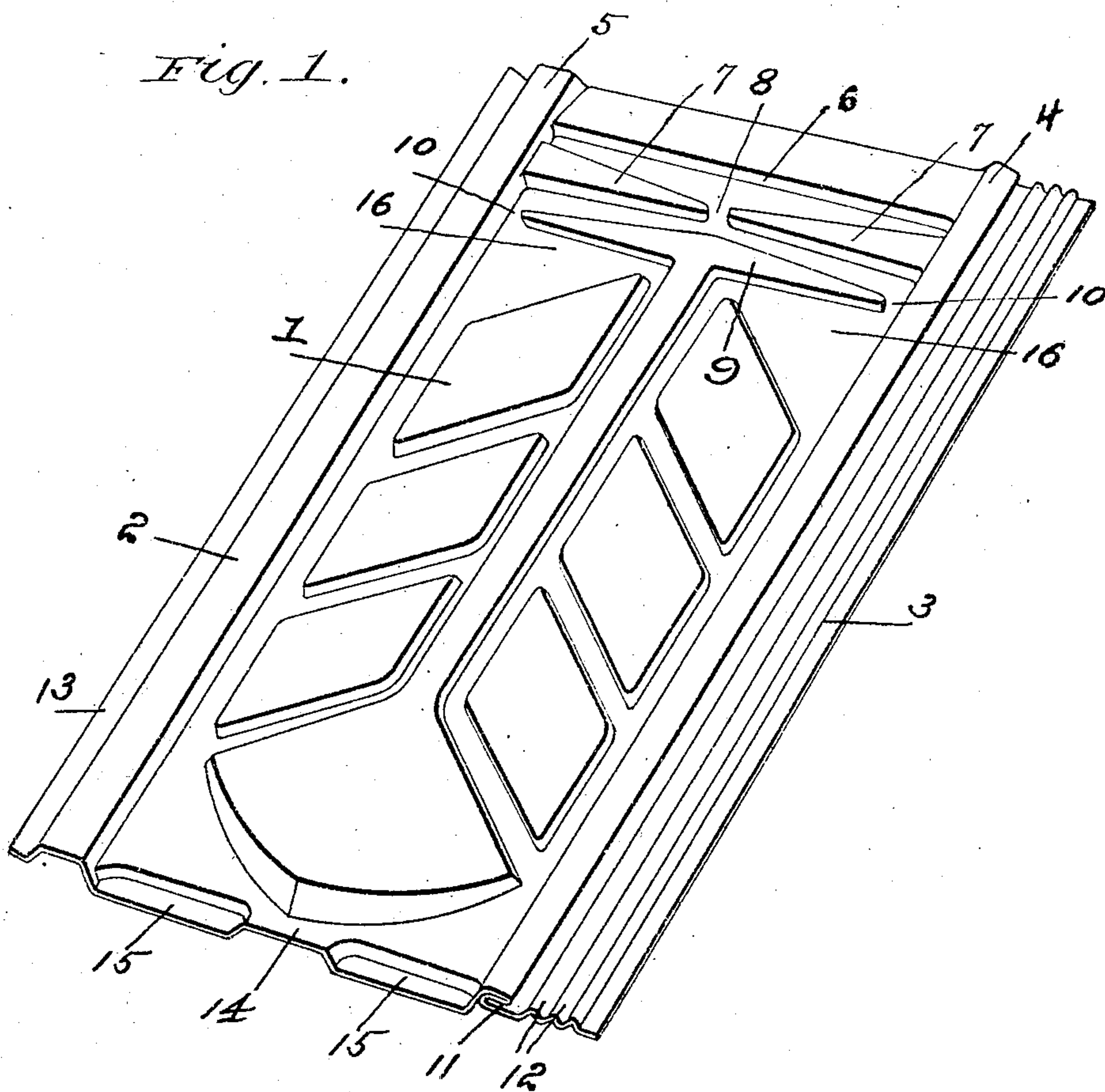
No. 774,740.

PATENTED NOV. 15, 1904.

C. L. DARNALL.
METALLIC SHINGLE.

APPLICATION FILED MAY 2, 1904.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES LEE DARNALL, OF FLOYD, VIRGINIA.

METALLIC SHINGLE.

SPECIFICATION forming part of Letters Patent No. 774,740, dated November 15, 1904.

Application filed May 2, 1904. Serial No. 205,964. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LEE DARNALL, a citizen of the United States, residing at Floyd, county of Floyd, State of Virginia, have invented certain new and useful Improvements in Metallic Shingles, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a perspective view of a shingle; Fig. 2, a detail longitudinal sectional view of the overlapping ends of two shingles, and Fig. 3 a transverse sectional view through the interlocked side edges of the two shingles looking upward at the lower edge of the overlapping shingle.

The main object of this invention is to provide a shingle with a water-lock at its upper edge which will effectually prevent water being driven up under the ends of the shingles and with interlocking side edges which will be substantially water-tight, whereby said shingle may be used on roofs having a slight pitch and yet effectually prevent leakage.

A further object of the invention is to provide a shingle of simple construction which may be readily and cheaply manufactured.

Referring to the various parts by numerals, 1 designates the central panel or main portion of the shingle; 2, the overlapping side edge, and 3 the underlying edge thereof; 4 and 5, the raised side flanges which mark the central panel.

At the upper end of the shingle is formed a raised bar or flange 6, which extends entirely across the main panel of the shingle from one side flange to the other, forming a complete dam and effectually preventing the upward passage of water. Slightly below this bar 6 are two inward-extending ridges 7, whose outer ends are integral with the raised side flanges 4 and 5, their inner ends being slightly separated to form a passage-way 8. The upper edges of these ridges taper downwardly and inwardly, so that any water passing over them and into the space between the bar 6 and said ridges will drain toward the center opening 8 and thence through said opening down the shingle. Just below the ridges 7 is formed a ridge 9, whose

ends terminate short of the flanges 4 and 5 to form the draining-openings or passage-ways 10 around the ends of the ridge 9. The upper edge of this ridge 9 tapers from its center downward toward its ends, so that any water draining through the passage 8 will be carried laterally toward the side flanges 4 and 5 and thence down the shingle. It will be noted that this ridge 9 forms a complete bar, which prevents water being driven up through the passage 8. It will be readily seen that the arrangement of the bar 6 and ridges 7 and 9 forms a complete water-lock and effectually prevents water being driven up over the top or upper edge of the shingle and yet permits any water that may be driven up over the ridge 9 or the ridges 5 to quickly drain back down the shingle.

The side flange 4 is formed by bending under the material of the shingle to form the receiving member 11 of the locking-flange. The portion of the underlying edge of the shingle which projects beyond the outer edge of the receiving member 11 of the locking-flange is formed with a plurality of longitudinal ridges 12, which are designed to prevent water being driven under the overlapping portion of the adjoining shingle and over the edge of the underlying member. Three of these ridges are shown in the drawings; but it is obvious that as many of them as may be desired may be employed. The overlapping member of the shingle is formed with the substantially flat portion 13, which is adapted to enter the receiving member 11 of the interlocking flange of the adjoining shingle, the broad flange 7 being adapted to extend over the ridges 12, as shown clearly in Fig. 3 of the drawings. It will thus be seen that should any water be driven under or through the interlocking members it must pass over the three ridges before it reaches the edge of the underlying portion of the shingle. It will also be noted that should any moisture accumulate in the receiving member of the interlocking flange it will drain down onto the next shingle and will be prevented from passing inward over the side edge of the shingle.

At its lower edge the shingle is formed with the raised central portion 14, which is adapted to span the interlocked side edges of the

two shingles next below, as shown in Fig. 3, and with the two depressed portions 15, one on each side of the raised central portion, which are adapted to rest on the shingles at each side of the interlocked flanges, as shown in Fig. 3.

These depressed portions rest on the shingle at the points marked 16 in Fig. 1, just below the water-lock. This is clearly shown in Fig.

2. It will be readily seen by reference to this figure that all the members of the water-lock lie under the lower end of the overlapping shingle, so that water in order to pass up over the end of the shingle must first be driven under the edge of the overlapping shingle and then over the members of the water-lock. This is practically impossible, so that an effectual water-lock is provided which seals the overlapping ends of the shingles.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A metallic shingle formed with a raised longitudinal flange at each of its side edges, one of said flanges forming the overlying member and the other the underlying member of an interlocking flange, and a water-lock at the upper edge of the shingle, said lock being formed by an upper complete bar or dam extending entirely across the space between the side flanges, two inward-extending ridges which abut against the side flanges at their outer ends their inner ends being slightly separated to form a passage-way, and a single transverse ridge below said ridges, said trans-

verse ridge terminating short of the side flanges to form passage-ways between its ends and the side flanges, whereby water may drain downward through the water-lock but cannot be driven up through it.

2. A metallic shingle formed with a raised longitudinal flange at each of its side edges, one of said flanges forming the overlying member and the other the underlying member of an interlocking flange, and a water-lock at the upper edge of the shingle, said lock being formed by an upper complete bar or dam extending entirely across the space between the side flanges, two inward-extending ridges which abut against the side flanges at their outer ends, their inner ends being slightly separated to form a passage-way, and a single transverse ridge below said ridges, said transverse ridge terminating short of the side flanges to form passage-ways between its ends and the side flanges, whereby water may drain downward through the water-lock but cannot be driven up through it; a raised central portion at its lower edge, as 14, and two depressed portions, as 15, on each side of the raised central portion, substantially as described and for the purpose set forth.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 27th day of April, 1904.

CHARLES LEE DARNALL.

Witnesses:

J. E. BURWELL,
P. F. HOWELL.