A. D. BIERMAN.

ROOFING OR SIDING SHINGLE.

APPLICATION FILED AUG. 5, 1909.

974,461. **Patented Nov. 1, 1910.**

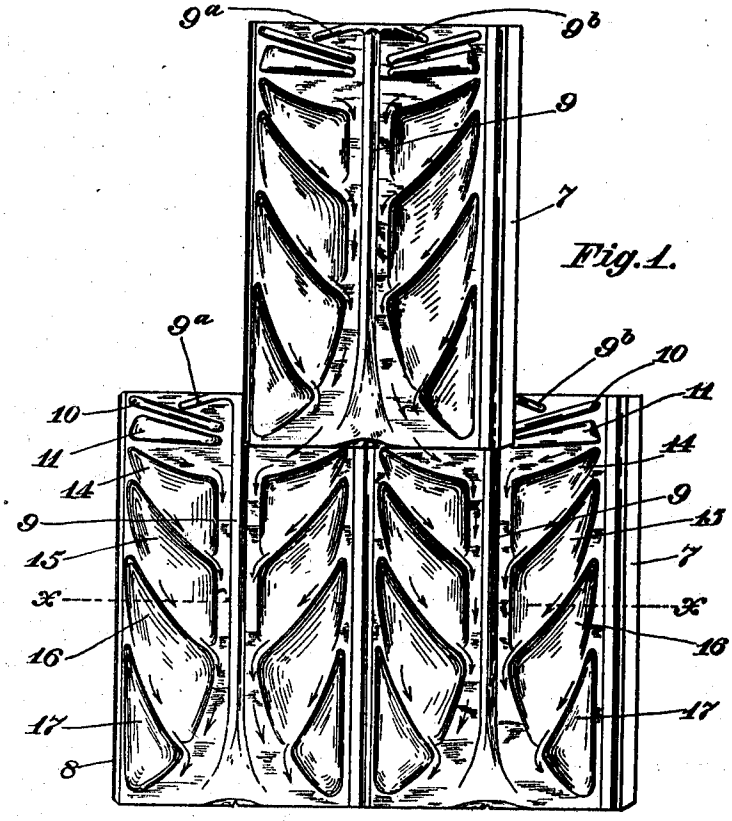


Fig. 1.

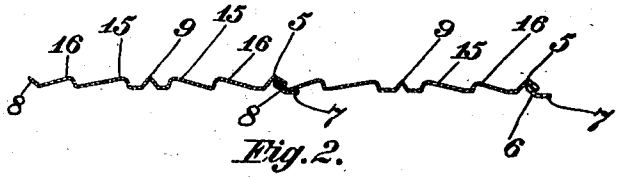


Fig. 2.

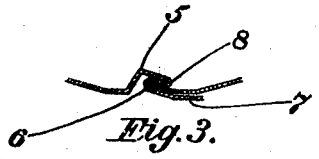


Fig. 3.

Witnesses

Wayne Toard

Alfred D. Paul

Inventor

Albert D. Bierman

by Finnel & Finnel

his Attorneys

UNITED STATES PATENT OFFICE.

ALBERT D. BIERMAN, OF COLUMBUS, OHIO, ASSIGNOR TO THE KINNEAR AND GAGER MANUFACTURING COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

ROOFING OR SIDING SHINGLE.

974,461. Specification of Letters Patent. Patented Nov. 1, 1910.

Application filed August 5, 1909. Serial No. 511,354.

To all whom it may concern:

Be it known that I, ALBERT D. BIERMAN, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Roofing or Siding Shingles, of which the following is a specification.

The principal object of this invention is to provide a shingle that when properly laid up with shingles of the same sort will direct water away from the joints.

The invention is embodied in the construction hereinafter described and particularly pointed out in the claims.

In the accompanying drawing: Figure 1 shows in plan view a section of roof comprised of three of the shingles properly associated to shed water. Fig. 2 is a section on the line *x*—*x* Fig. 1. Fig. 3 is a detail in sectional view showing the joint on a larger scale.

The shingles are preferably made of rectangular or oblong plates of metal. At its right hand side edge the metal is bent to form a hip 5 the metal at the right hand side of the hip being tucked inward and upward to form an inclined groove 6 with a mouth that opens downward there being enough of the margin projecting beyond the mouth of the groove to form a nailing edge 7. The left hand edge of the shingle is bent upward to form a tongue 8 that can be fitted into a groove like that described as being formed at the right hand side of the shingle. Along the middle of the shingle and extending lengthwise thereof, in the instance shown, is pressed upward a rib or hip 9 that terminates at its upper end in two lateral downwardly inclined ribs lying at opposite sides like those indicated at 9^a and 9^b each rib extending only part way toward the corresponding edge of the shingle and in a downward direction. The lower end of the central rib or hip 9 is broadened toward each side so as to be of greater width than the space between the adjacent upper ends of the exposed downwardly inclined ribs of the two jointed shingles next below to deflect water away from the center of the shingle at that end and into channels to deflect water toward the middles of the shingles next below as will presently appear. Positioned beyond the ends of the lateral ribs 9^a and 9^b are approximately parallel ribs like those indicated at 10 and 11. The ribs 10 and 11 are inclined downward toward the middle hip of the shingle so as to deflect such water as may splash or seep upward beyond them away from the jointing edges of the slat. The ribs 11 are made tapering in outline the smaller end pointing toward the middle of the shingle and the lower edge thereof lying substantially at right angles to the middle hip 9 and the jointing edge. On each side of the middle rib 9 are a number of embossments as seen at 14, 15, 16 and 17 symmetrically arranged on opposite sides of the middle rib or so as to form between them channels as indicated by the arrows inclined toward the middle of the shingle and adapted to direct water toward that portion of the shingle. These channels are of increasing inclination or pitch toward the lower end of the shingle and at that portion of the shingle the main channel into which the lateral channels between the embossments discharge is deflected outward away from the middle line of the shingle.

The shingles are laid by lapping a higher one over the upper end of the joint of two next lower shingles and so as to cover the ribs 10 and 11 of two separate shingles and further, so that the middle hip or rib 9 of one shingle alines with the hip joint of two shingles all as clearly shown in Fig. 1. When the shingles are so laid it will be observed that water on the upper end of the higher shingle runs first toward the middle rib of that shingle and then down the shingle adjacent the middle and finally in a lateral direction toward the middle ribs of each of the shingles next below. In other words, the main flow or drift of the water is always away from the joints and toward the middle of the shingles. This construction prevents the collection of water for any considerable period in the neighborhood of the joints and therefore, avoids leakage and rapid rusting. It will be particularly observed that the channels between the embossments lead in a downwardly inclined direction from points near the jointing edges of the shingles.

The form of the embossments can be varied without departing from the gist of the invention.

What I claim is:

1. A roofing or siding shingle consisting

of a plate of suitable material having suitable jointing edges and a middle rib expanded at its lower end, and inclined embossments between the middle rib and the edges of the shingle adapted to form downwardly inclined channels to direct water toward the middle of the shingle at the upper portion and toward the edges of the shingle at its lower portion, the width of the expanded lower end of the middle rib being greater than that of the space between the adjacent ends of the upper inclined exposed embossments of two similar shingles when jointed.

2. A roofing or siding shingle having a middle rib terminating at its upper end in oppositely laterally extending short ribs each downwardly inclined toward the edge of the shingle and reversely inclined ribs beyond the ends of said lateral ribs and extending above and below said ends and inclined downwardly toward the middle rib of the shingle.

ALBERT D. BIERMAN.

Witnesses:
BENJAMIN FINCKEL,
MAYME FOARD.