No. 632,691. Patented Sept. 12, 1899.

W. C. BATES.

ROOF.

(Application filed May 23, 1899.)

(No Model.)

Fig. 1.

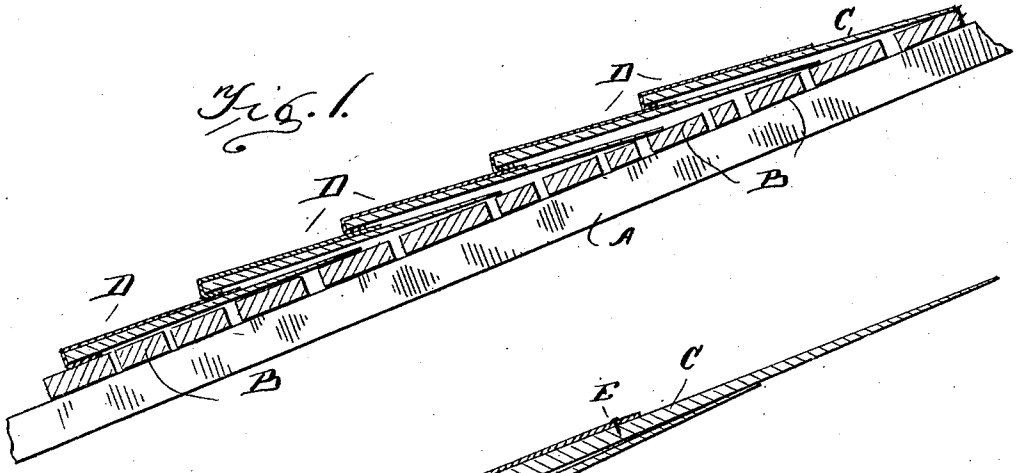


Fig. 2.

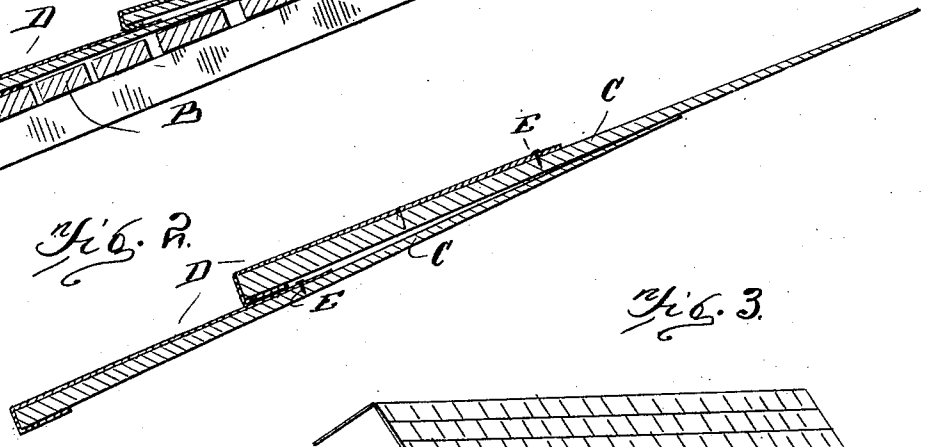


Fig. 3.

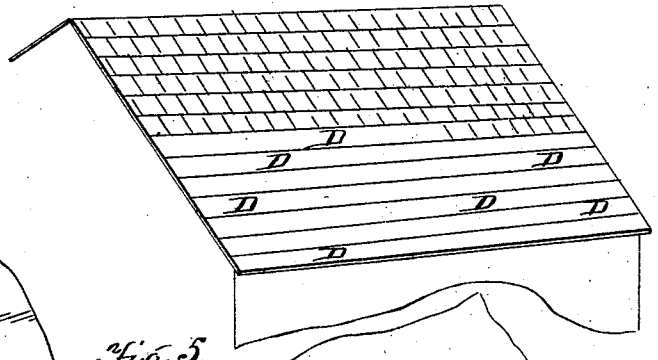


Fig. 4.

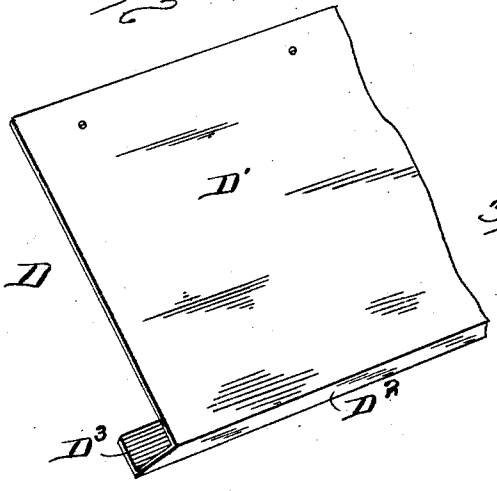
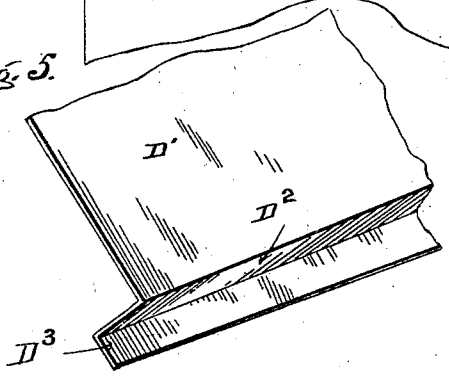


Fig. 5.



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ROOF.

SPECIFICATION forming part of Letters Patent No. 632,691, dated September 12, 1899.

Application filed May 23, 1899. Serial No. 717,923. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. BATES, a citizen of the United States, residing at Riverton, in the State of Nebraska, have invented certain new and useful Improvements in Roofs, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to roofing material. The object of the invention is to make a combined roofing of shingles and "tin" or tinned-iron plates usually called "commercial" or "roofing" tin and to produce sheets or plates of metal applicable to shingle roofs, either old or new, so as to make a much stronger and more durable roof than usual. The plates are applicable to the repair of old roofs.

Figure 1 is a broken section of a shingle roof with my tinned plates or sheets applied to a few of the shingle-courses. Fig. 2 is a section of two shingles with my plates applied. Fig. 3 is a broken perspective showing a shingle roof patched with my tin plates. Fig. 4 is a broken perspective of one of my tinned roofing-plates. Fig. 5 is a perspective view of a modification.

A indicates a rafter, B the sheathing or roof-boards, and C denotes the shingles in their usual relation to each other when laid on the roof.

D denotes a strip of tin or sheet metal preferably as long as the length of a whole course of shingles. This strip D presents a flat surface D′ of a width something more than the "weather-surface" of a shingle—say six to ten inches—but less than the entire length of the shingles. Commercial shingles are usually of uniform length in the same grade; but the length may be sixteen, eighteen, twenty, twenty-two, or twenty-four inches, with occasionally a variety or grade of still greater length. The sheet D is bent at about a right angle, so as to present a face D^2, which will cover the end of a shingle. The edge is preferably again turned at nearly a right angle, so as to form a lip D^3—say half an inch wide, more or less. This strip D is applied to a course of shingles after the shingles are laid, the top D^3 extending under the lower side of the shingle-butt, the face D^2 covering the end of the shingle and the flat surface D′ covering the weather-surface of the shingle and extending a little distance—say two inches—under the next upper course of shingles. The strips D may be applied as described and placed flush or slightly overlap at the ends where strips are not long enough to extend the full length of a course of shingles.

When laying a new roof, the shingles of a lower "course" are first applied to the roof. A strip D the whole length of the course is then applied, and the part D′ is tacked or otherwise secured to the shingles, the tacks E being near the edge of the strip D. A second course of shingles is then laid, the butts of these shingles overlapping the tacks E. A second tin plate is then applied, the edge D^3 being slipped under the last course of shingles, and thus holding that edge of the strip, while the upper edge is tacked as before, and so on. The lower course of shingles may be covered by a strip having the edge D^3 turned under to a greater distance than the other courses.

In patching an old roof the edge D′ may be slipped under one course of shingle-butts and the sheet then forced to position, the edge D^3 entering under the butts next below. Usually the nailing can be done, if needful, through cracks or joints in the shingles; but the plates will stay very well without nailing. An old roof may thus be repaired by covering the leaky part only.

Where a new roof is made, a much larger surface of the shingle may be laid to what is called the "weather." As a matter of fact, where the shingles are covered by my strips there is no surface of shingle exposed to weather. The roof is covered with tin, and is thus as fireproof and weather-proof as the usual tin roof, while it is held so firmly that it cannot be blown from the roof by such a wind as would tear the usual tin roof almost like paper.

The compound roof described is cooler in summer than a tin roof, as the shingles are non-conductors of heat, and it is much warmer in winter than either a shingle or tin roof, as it is practically impervious to air as well as to moisture.

In some cases the edge D^3 may be turned outwardly, as indicated in Fig. 5, and secured

by solder or otherwise, or said flange may be omitted.

For either roofing or siding shingles covered in this manner are nearly fireproof.

This roof can be laid by a carpenter or workman of ordinary skill. It is much cheaper than a roof in which the entire surface of each shingle is covered with a tin plate turned in at the edges, as in the patent of Hickox, No. 113,882, of April 18, 1871. My roof also presents many less cracks or openings to the weather than would a roof in which each shingle has a separate metallic face.

What I claim is—

1. A sheet-metal covering for a course of shingles having an inturned edge to slip under the end of the shingle-course, an upright face covering the shingle-butt, and a weather-surface greater in width than the longitudinal weather-surface of a course of shingles, but less than the entire length of a shingle substantially as described.

2. A tinned-metal shingle-cover, having a narrow flat lip as D^3, an upright face D^2 of a size to cover a shingle-butt, and a weather-face in length exceeding the width of a shingle, and in width less than the length of a shingle D′, substantially as described.

3. The composite roof described, consisting of shingles laid in courses as usual, combined with sheet-metal covering-strips, said strips each having a narrow edge under the shingle an upright face covering a plurality of shingle-butts, and a flat weather-face extending under the butts of the next course of superposed shingles, all combined substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM C. BATES.

Witnesses:
G. W. ENOS,
T. I. LEON.