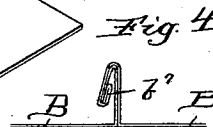
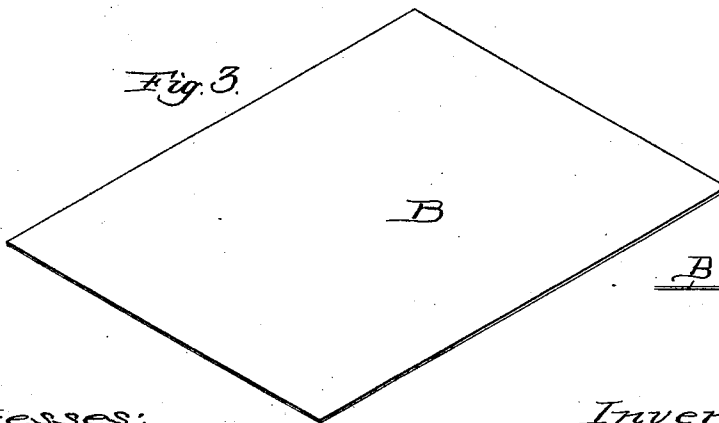
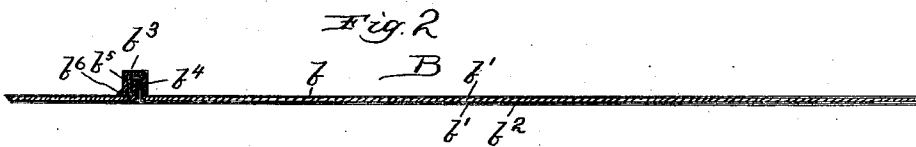
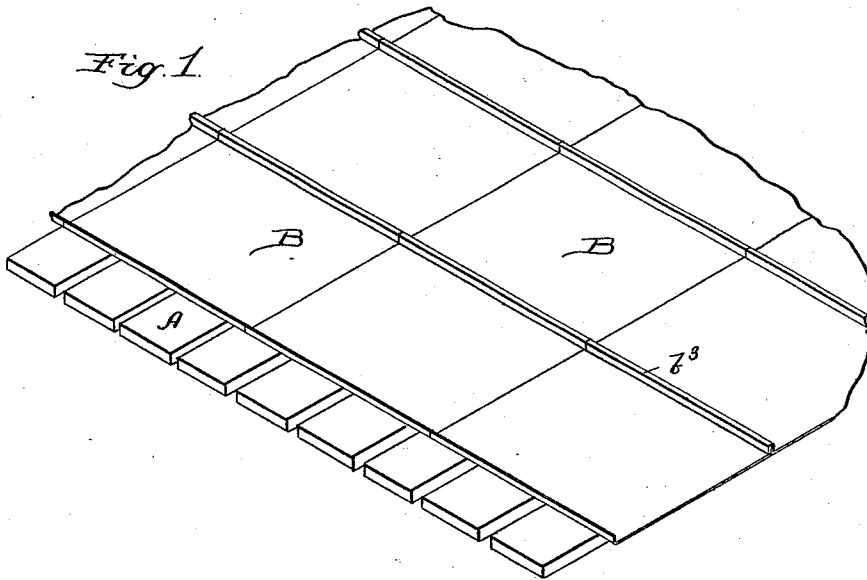


(No Model.)

E. NORTON.
SHEET METAL ROOFING.

No. 484,640.

Patented Oct. 18, 1892.



Witnesses:

Sam C. Curtis
A. W. Munday

Inventor:
Edwin Norton

By Munday, Curtis & Adams,
his Attorneys.

UNITED STATES PATENT OFFICE.

EDWIN NORTON, OF MAYWOOD, ASSIGNOR TO HIMSELF, AND OLIVER W. NORTON, OF CHICAGO, ILLINOIS.

SHEET-METAL ROOFING.

SPECIFICATION forming part of Letters Patent No. 484,640, dated October 18, 1892.

Application filed April 18, 1892. Serial No. 429,532. (No model.)

To all whom it may concern:

Be it known that I, EDWIN NORTON, a citizen of the United States, residing in Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sheet-Metal Roofing, of which the following is a specification.

My invention relates to the construction of sheet-metal roofs of the class that are made of tin or terne plates—that is to say, thin soft pliable sheets of steel or iron coated on both sides with pure tin or lead or other metal, the meeting edges of the plates being soldered or seamed together. I have discovered that the life or durability of this class of roofs may be doubled or very greatly increased by furnishing the under side of the sheet which lies upon or comes in contact with the roofing-boards with a coating of enamel. In practicing my invention the tin or terne roofing plates or sheets are first enameled on one side, this being done by painting or coating one side of the sheet with a paint composed, preferably, of oil and red lead or other suitable paint, and then baking the sheets thus coated or painted in an oven. The roofing-sheets thus constructed are laid with their enameled side down in making the roof and their meeting edges seamed and soldered together. As the enameled side of the roofing-plate will not take the solder, the soldered seam is formed at the inner angle of the upright flange, or the edge of one of the sheets may be folded upon itself to bring its metallic surface in contact with the adjoining sheet for soldering.

In the accompanying drawings, forming a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a perspective view of a section or portion of a roof embodying my invention. Fig. 2 is an enlarged cross-section in which the thickness of the sheets and their coating is exaggerated for sake of clearness. Fig. 3 is a perspective view of one of my improved roofing-plates. Fig. 4 shows another form of the seam.

In the drawings, A represents the roofing boards or surface upon which the metallic roofing-plates are to be laid.

B represents my improved roofing plates or

sheets, the same being composed of thin soft pliable sheets of iron or steel *b*, furnished with a tin, lead, or other metallic coating *b'*, imposed upon which, upon one side, is a coating of enamel *b²*. The enamel-coated side of the sheet is laid down next to the roofing-boards and serves to effectually protect the metal of the sheet from all moisture or acids that may be in the wood or bed surface A upon which the sheets are laid. This enameled coating *b²* on the under side of the sheet effectually prevents all oxidation or deterioration of the iron or steel sheets *b* and of its tin, lead, or other metallic coating *b'* from the under side and operates to practically double or very greatly increase the ordinary life of the roofing plate.

The meeting edges of the sheets B B are secured together by a soldered seam *b³*, the sheets being provided with overlapping flanges *b⁴ b⁵*. The soldered seam may be located at the inner angle *b⁶*, formed by the upright flanges *b⁵* and the overlapping flange *b⁴*, or, if preferred, one of the two adjoining sheets B B may be furnished with a fold *b⁷* at its edge, so as to bring the metallic or unenameled side of such fold outermost at the soldered joint *b³*. Both forms of the soldered joint are clearly indicated in the drawings. By this high degree of heat, to which the paint is subjected in the baking operation to form the enamel coating, the paint becomes amalgamated or intimately united with the metal surface, so that the sheet may be folded or bent as required in making the seams without cracking or scaling off the enamel coating, and so that this coating cannot be rubbed or scraped off by ordinary usage in the roof under expansion and contraction.

I claim—

1. The improved roof herein shown and described and consisting of thin soft pliable sheets of steel or iron coated with tin, lead, or other suitable metal and furnished on the under side with a flexible coating of enamel formed by coating the sheets with paint and then baking the same, the meeting edges of said sheets being united by a soldered seam, substantially as specified.

2. The combination, with the roofing-boards or bed-surface A, of roofing-plates B, com-

posed of iron or steel sheets *b*, having the metallic coating *b'* of tin, lead, or other metal, and provided with a flexible enameled coating *b²* on the under side of said sheets formed
5 by coating the sheets with paint and then baking the same, said roofing-plates having at their meeting edges overlapping flanges *b⁴* *b⁵*, substantially as specified.
3. The improved roofing-plates herein
10 shown and described, consisting of thin soft

iron or steel sheets *b*, coated with tin or other metal *b'* and provided with a flexible enameled coating *b²* on the under side of the sheet formed by coating the sheets with paint and then baking the same, substantially as specified. 15

EDWIN NORTON.

Witnesses:

H. M. MUNDAY,
EDW. S. EVARTS.