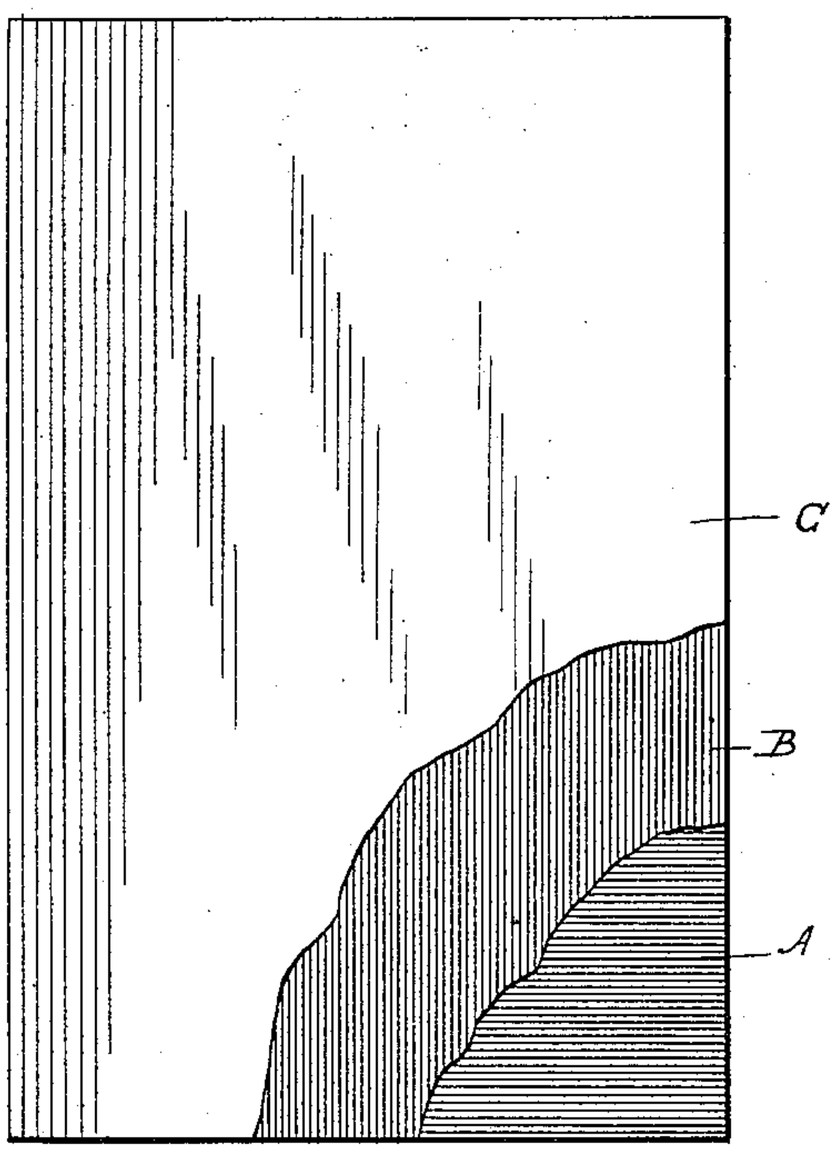
(No Model.)

M. G. FARMER.

METALLIC SHINGLE.

No. 347,928. Patented Aug. 24, 1886.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MOSES G. FARMER, OF NEW YORK, N. Y.

METALLIC SHINGLE.

SPECIFICATION forming part of Letters Patent No. 347,928, dated August 24, 1886.

Application filed June 17, 1886. Serial No. 205,393. (No model.)

To all whom it may concern:

Be it known that I, MOSES G. FARMER, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Metallic Shingles, of which the following is a specification.

In a patent granted to me April 21, 1885, No. 316,134, I have shown and described a roofing plate or shingle made of sheet-iron and copper coated. My present invention is an improvement on this device; and it consists of a shingle or plate for roofing purposes made of tinned sheet-iron or tin-plate copper coated.

In making a copper-coated sheet-iron shingle it is necessary to thoroughly clean the surface of the sheet-iron plate before depositing the copper, as otherwise the copper coating does not adhere perfectly to the iron and does not entirely envelop it. It is difficult to obtain such shingles without some flaws, and the presence of a very slight imperfection lessens very much the value and utility of a shingle.

I have found that I can produce a cheap and much superior shingle by coating the sheet-iron with tin and then depositing the coating of copper on the tinned surface. Such a shingle is little apt to contain flaws or imperfections, and is far more durable than those made of iron and copper alone.

The object of the tinning is to make a better surface for receiving the copper coating than that afforded by the iron. I may therefore use other metals for this purpose as an equivalent for the tin, if they can be made to adhere to the surface of the iron by process similar to the ordinary process of tinning.

The shingles may be made by an ordinary and simple process, such as the following: Sheets of the desired shape and size are cut from sheet-iron. They are then dipped in a bath of molten tin and lightly coated. They are then exposed to the action of an electric current in a proper solution and copper-coated, the coat being preferably thicker on that portion which in laying is exposed to the weather, as explained in a patent granted to me September 15, 1885, No. 326,108. The sheet-iron plates have two or more holes punched in them for the nails, and may be made plain or ornamental and of any thickness desired.

In the drawing hereto annexed I have shown a shingle made in this way, portions of the layers or coats being removed.

A is the sheet-iron body, B the tin coat, and C the exterior coating of copper.

What I claim is—

A shingle or roofing plate made of sheet-iron tinned and copper-coated, substantially as described.

MOSES G. FARMER.

Witnesses:

TIMO. DAME,

FRANK E. HARTLEY.