UNITED STATES PATENT OFFICE.

ROBERT McMANUS, OF ANSONIA, CONNECTICUT.

IMPROVEMENT IN TINNING AND FINISHING SHEET-COPPER.

Specification forming part of Letters Patent No. **200,079**, dated February 5, 1878; application filed December 11, 1877.

To all whom it may concern:

Be it known that I, ROBERT McMANUS, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new Improvement in Process for Tinning and Finishing Sheet-Copper; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention relates to an improvement in the process or method of tinning and finishing sheet-copper—that is to say, such sheets as are tinned upon one side only, and used for various purposes. In the usual process, in which the tin is flowed upon one surface, with the other exposed, that other exposed surface oxidizes quickly, so as to deface that surface to the extent that a subsequent polishing is necessary to fit the sheet ready for market, and this subsequent polishing is a source of considerable expense; and the object of this invention is to prevent this oxidizing or discoloring of the copper in the process of tinning; and it consists in excluding the air from the copper or uncoated surface during the process of tinning, and instantly on the completion of the tinning to plunge the sheet into a cold bath.

In carrying out this invention the best results have been attained by placing the sheet, copper side down, upon a plate, which it fits closely, so that the copper surface thus lying upon the plate is protected from atmospheric influences. Under these circumstances the tin is flowed upon the opposite surface in the usual manner; and instantly, or before the copper can have been heated to any considerble extent, the sheet is transferred from the plate on which it rests into a cold bath, and so quickly that very slight, if any, exposure of the copper surface to the atmosphere is made. Preferably an alkaline water is used for the bath, as attaining the best results; but a simple bath of cold water will produce very good results, it only being essential that it shall be a sudden and quickly-cooling medium, to operate without exposing the copper surface to the atmosphere.

When the copper thus treated is thoroughly cooled, it is subjected to the usual rolling to give the requisite smoothing to the tin surface, and the copper surface is unchanged in its appearance from what it was before being tinned. Hence the usual after-polishing is avoided.

I claim—

The herein-described process for tinning sheet-copper, consisting in applying the tin to one surface, while the other is protected from the atmosphere, and immediately plunging into a cooling-bath, substantially as set forth.

ROBERT McMANUS.

Witnesses:
JOHN E. EARLE,
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