

UNITED STATES PATENT OFFICE.

ANDREW O'NEILL, OF PORTSMOUTH, OHIO.

IMPROVED SHEET-COPPER PLATES FOR CULINARY VESSELS.

Specification forming part of Letters Patent No. **68,331**, dated August 27, 1867.

To whom it may concern:

Be it known that I, ANDREW O'NEILL, of Portsmouth, Scioto county, Ohio, have invented a new and useful Manufacture of Sheet-Copper for Culinary Vessels; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a cheap, durable, and greatly improved mode of preparing sheets of tinned copper for the sides or bodies of wash-boilers and other culinary vessels.

Tinned copper sheeting, as now usually prepared for pot-bodies, acquires a discolored, stained, and mottled appearance by the oxygenating agency of the heat and acids employed in the process of tinning, and to those causes of disfigurement there is often added that arising from the overflow of the tin itself onto the copper side. This disfigurement has heretofore been sought to be removed either by acids, which in turn "cut" the tin and initiate rust, or by tedious and costly mechanical abrasion, which consumes much time and material.

In consequence of the above, it is frequently necessary to retin the interior of the vessels after they are made up, which reproduces the evils above alluded to. To the above evils there is commonly superadded that of unevenness of tinned surface due to hand planishing or striping, the tin being found to wear rapidly away from the ridges or eminences.

My process is as follows: I provide copper sheets of the precise size required to compose the body of the wash-boiler or other desired vessel, and, having tinned it by the usual or any approved process, I impart to the copper side a rich and uniform mahogany color by the following means: I take one gallon best enamel varnish, two and three-fourths pints Demar varnish, two and one-fourth pints spirits turpentine, and four and one-eighth pounds Venetian

red. I then take the tinned sheets in the rough state, and, without subjecting them to any acid-bath, scouring, planishing, or any other chemical or mechanical preparation whatsoever, I apply the above varnish with a soft brush to the upper side. The varnished sheets, having been laid aside for about twenty-four hours, are completed ready for market by being passed through highly-polished rolls of steel or case-hardened or chilled iron.

Sheets thus prepared require, as before stated, no special or costly preparation, the varnish completely covering up all stains of tin or heat, and, when thus rolled, adhering so intimately to the substance of the copper as to be free from any liability to peel or separate under the action of the scouring-tool or in after use. Sheets thus prepared present, on their varnished or exterior side, a hard, glossy, and even surface of uniform color. The tinned surface also, not having been subject to the usual disfigurement from rough handling and sweaty contact of the professional planisher, and having been intimately united to the copper, and reduced to a hard, even, and lustrous surface under the severe pressure of the polished rolls, has a better and more marketable appearance, and a more permanent brilliancy, while the superior stiffness and elasticity of the sheet preserves it from denting.

I claim herein as new and of my invention—

As a new article of manufacture, a sheet of copper tinned, varnished, and cold-rolled in the manner set forth.

In testimony of which invention I hereunto set my hand.

ANDREW O'NEILL.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.