

# UNITED STATES PATENT OFFICE.

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## COMPOSITION FOR PICKLING METAL BARS, PLATES, SHEETS, &c.

SPECIFICATION forming part of Letters Patent No. 640,491, dated January 2, 1900.

Application filed May 19, 1899. Serial No. 717,476. (No specimens.)

*To all whom it may concern:*

Be it known that we, CHAUNCEY E. ROBINSON and WILLIAM L. SUTHERLAND, citizens of the United States of America, residing at South Conneltsville, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Compositions for Pickling Metal Bars, Plates, Sheets, &c.; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

Our invention relates to certain new and useful improvements in compositions for pickling metal bars, sheets, or plates.

Our invention is preferably adapted for use in the pickling of metal plates or sheets used in the manufacture of tin or terne plates for the removal of all foreign matter from the same which is formed thereupon during the process of manufacture.

During the annealing process the edges of the sheets or plates become black, causing considerable expense to remove and again clear the plate, and also what is known as "patches" appear, caused from contact or exposure to the air or improper handling, and also in the rolling of the plates or sheets foreign matter adhering thereto is sometimes pressed with the plate. Also during the process of plating foreign substances may be pressed to the sheets, making what is known in the art as "menders."

To remedy and overcome these defects, to lessen the labor, to save material, (such as acids,) to clear plates thoroughly, to prevent

patches, and remove the foreign matter from menders without destroying the plating are the objects of our invention.

To pickle bars, sheets, or plates in accordance with our invention, we form from bran, middlings, wheat, or other starchy substance by boiling, steaming, or otherwise extracting from the said material a liquor or liquid which may be fermented or used in an unfermented condition, then straining the product to remove all solid substances. The liquor thus obtained is mixed in equal proportions with dilute sulfuric or other acid and the plates treated to a bath in any suitable manner. The starchy substance produced from the bran, wheat, or middlings or other starchy substance, acting in conjunction with the acids, will prevent all the defects above enumerated and also the evaporation of the acids.

Having thus described our invention, we claim—

A composition for pickling metal bars, plates, sheets and the like, consisting of a strained starchy substance obtained from a mixture of wheat bran and water, and an equal part of sulfuric acid thoroughly commingled with the starchy substance, substantially as described.

In testimony whereof we have hereunto affixed our signatures in the presence of two subscribing witnesses.

CHAUNCEY E. ROBINSON.  
WILLIAM L. SUTHERLAND.

Witnesses:

D. C. HOOD,  
HENRY E. SADLER.