UNITED STATES PATENT OFFICE.

WILLIAM MILTON THEOBALD, OF WELLSVILLE, OHIO.

PROCESS OF FINISHING METAL PLATES OR SHEETS.

SPECIFICATION forming part of Letters Patent No. 627,023, dated June 13, 1899.

Original application filed June 7, 1898, Serial No. 682,841. Divided and this application filed November 9, 1898. Serial No. 695,978. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM MILTON THEOBALD, a citizen of the United States, residing at Wellsville, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Processes of Finishing Metal Plates or Sheets; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

In an application for patent filed by me June 7, 1898, Serial No. 682,841, I described and claimed the invention set forth in the following specification and claim, which forms a divisional application of that above referred to.

I will now proceed to describe the invention which forms the subject-matter of the present application for patent and which was disclosed in the original application above referred to.

My invention relates to an improved process of finishing metal sheets or plates; and the object is to obtain a more uniform blue or black color of the sheets or plates.

To this end the invention consists in the process hereinafter more fully described, and particularly specified in the claim.

In annealing metal sheets or plates the same are placed upon the annealing pan or bottom and covered by the annealing-box, after which the box and pan are luted in the usual manner to prevent the ingress of air to the sheets or plates, which would result in excessive oxidation. The annealing-box and its contents are now charged into a suitable furnace and brought to the proper or desired degree of heat, approximately 1,400° Fahrenheit. This completes the first step of my process.

In the second and improved step of my process the metal sheets or plates are taken from the furnace to polishing or smoothing rolls and passed between the same, during which time they are exposed to atmospheric air and the temperature lowers to about 900° Fahrenheit and the desired degree of oxidation takes place. The plates are then covered with any suitable cover, such as an annealing-box, to prevent further oxidation, and are then charged into a furnace having a temperature less than the temperature of the sheets when passed between the rolls and allowed to cool in said furnace, thus securing a uniform color.

The furnace receiving the sheets after rolling should be as near as practicable to the temperature of such sheets or of slightly lower temperature, its function being to retard the cooling of the sheets and so govern the color thereof, insuring the practically uniform blue color.

Having thus described the invention, what I claim, and desire to secure by Letters Patent, is—

The process herein described of preparing metal sheets or plates, which consists in annealing said plates free from contact with atmospheric air, cooling the plates free from atmospheric air to a temperature ranging between the annealing degree of heat and about 900° Fahrenheit, then smoothing and polishing said sheets while subjected to the atmospheric air for oxidation, then covering said plates to prevent further oxidation, then charging said plates into a furnace and subjecting them to a temperature less than that of the temperature of the plates when being smoothed and polished, and then allowing the plates to gradually cool off, thereby securing a uniform color, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM MILTON THEOBALD.

Witnesses:

H. B. WILLSON,

BENJ. G. COWL.