

United States Patent Office.

GEORGE J. STURDY AND SOLOMON W. YOUNG, OF PROVIDENCE,
RHODE ISLAND.

Letters Patent No. 87,442, dated March 2, 1869.

IMPROVED PROCESS OF CLEANING METALLIC ARTICLES FOR PLATING AND GILDING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, GEORGE J. STURDY and SOLOMON W. YOUNG, of Providence, in the county of Providence, and State of Rhode Island, have invented a new and improved Process for Preparing Metallic Articles for Gilding and Plating; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

This invention relates to a new and improved process for finishing, for gilding or plating, various metallic articles, as hooks and eyes, buttons, eyelets, and all metallic articles of a similar nature; and

It consists in revolving or agitating such articles (after placing them in a suitable vessel or cylinder) in a solution of cyanide of potassium, or in any equivalent alkaline solution, without the use of an acid or acids, in the manner and for the purpose hereinafter described.

Hitherto such articles have been prepared for gilding or plating, by means of acid-baths, as nitric, sulphuric, or other equivalent acids. This method is objectionable on many accounts. In the first place, the quantity of acid required renders it expensive, when compared with our new process; in the second, the action of the acid upon the surface of the metal is far from being as effective in removing the oxide and other impurities as that of the dilute cyanide of potassium; and, thirdly, while the acid, from its greater specific gravity or density, holds the removed oxide in suspension, thereby allowing it to come in contact with the surface of the articles, abrading and roughening them, or loosely adhering thereto, by the use of the cyanide of potassium, the oxide is dissolved, a new chemical action takes place, the surface of the article is left clean,

smooth, and bright, and the process made perfect in every particular.

In carrying out our invention, and preparing the articles for gilding or plating, we place them in a cylinder or other suitable vessel, and cover them with a solution of the cyanide of potassium. The cylinder or vessel is revolved or agitated until the articles are perfectly clean and bright, after which they are ready for gilding or plating.

Revolving or agitating the articles in the cylinder or vessel, keeps the surface clean, the oxide is dissolved, and all foreign substances are removed, without oxidizing the metal as much as the acid-bath. By this process, the articles are left in splendid condition for gilding or plating.

Having thus described our invention,

We claim as new, and desire to secure by Letters Patent—

1. For cleaning, burnishing, or polishing metallic articles, (as hooks and eyes, buttons, eyelets, and other articles of metal, in preparing them for gilding or plating,) revolving, shaking, or agitating such articles in a cylinder or other suitable vessel, when immersed in a solution of cyanide of potassium, substantially as described.

2. Preparing metallic articles for gilding or plating, by means of a mechanical and chemical process combined, substantially as described.

GEORGE J. STURDY.
SOLOMON W. YOUNG.

Witnesses:

HENRY MARTIN,
STEVENS BECKWITH.