UNITED STATES PATENT OFFICE.

JOHN PECKHAM, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN CLEANING AND LACQUERING BRASS.

Specification forming part of Letters Patent No. **218,830**, dated August 26, 1879; application filed April 15, 1879.

To all whom it may concern:

Be it known that I, JOHN PECKHAM, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in the Art of Cleaning and Lacquering Brass, other alloys, and metals, of which the following is a specification.

My invention consists in making the cleaning and lacquering one continuous process, and in omitting some of the operations performed when the cleaning and lacquering are separate and distinct processes.

To enable others skilled in the art to which my invention belongs to avail themselves of my improved process, I will describe it in detail.

The "dip" for cleaning the alloys and metal, as the mixture of water and acids, or of water, acids, and salts, is technically called, may be any of the mixtures used for the purpose—as, for example, equal parts of water and nitric and sulphuric acids.

The lacquer I use in my improved process is composed of the following ingredients, in about the proportions mentioned: water, one gallon; shellac, one pound; borax, four ounces. The shellac and borax are added to the water, and the water is boiled a short time, the shellac and borax being readily dissolved.

The proportion of the ingredients may be varied somewhat to suit the work lacquered.

Sal-soda may be substituted for the borax, and bleached shellac may be used.

The lacquer may also be colored to suit the operator.

With the dip, lacquer, and baths I proceed as follows, the baths being a hot-water bath and an alkaline hot bath made by adding an ounce of sal-soda or potash to the gallon of water in the bath: The work to be lacquered is first dipped in the acid mixture until sufficiently clean and bright. It is then rinsed in the hot-water bath to remove any adhering acid. It is then rinsed in the alkaline hot bath, the alkali of which will unite with the acid, if any remains on the work, and neutralize it; but this alkaline bath may be dispensed with if the water in the hot-water bath is changed often enough to prevent the water from becoming too acid. The work is then lacquered by immersion in the lacquer—viz., the solution of shellac and borax, which is kept at or near to its boiling-point. On its removal the temperature of the work immediately dries it.

By the old or usual process with an alcoholic solution of shellac the work had to be dried after dipping in the acid mixture before it was lacquered, and, of course, was exposed to the air and more or less tarnished. After lacquering, many kinds of work required drying on a hot metal plate.

By my improved process the drying is rendered unnecessary, the operation of lacquering is more expeditiously performed, water takes the place of alcohol, and better results are obtained.

I do not claim any of the acid mixtures for cleaning and brightening alloys and metals; neither do I claim a solution of shellac in water having an alkaline reaction; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The improvement in the art of cleaning and lacquering brass, other alloys, and metals herein described, consisting in dipping the alloy or metal in a mixture of water and acids, in rinsing the same in a hot-water bath, and, before drying, in dipping it in a hot solution of shellac in water having alkali enough to dissolve the same, substantially as described.

JOHN PECKHAM.

Witnesses:

GEORGE TERRY,

WILLIAM HOPSON.