

# United States Patent Office.

HENRY G. REED, OF TAUNTON, MASSACHUSETTS, ASSIGNOR TO REED & BARTON, OF SAME PLACE.

Letters Patent No. 112,077, dated February 21, 1871.

## IMPROVEMENT IN THE MODES OF MANUFACTURING GOLD, SILVER, OR PLATED-WARE.

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

*To all whom it may concern:*

Be it known that I, HENRY G. REED, of Taunton, in the county of Bristol and State of Massachusetts, have invented a new and improved Method of Ornamenting Gold, Silver, or Plated-Ware; and I do hereby declare the following to be a full, clear, and exact description of the same, sufficient to enable others skilled in the art to which the invention appertains to fully understand and use it.

This invention is an improved process, whereby gold, silver, and plated-ware can be beautifully ornamented with chased, engraved, or etched designs, without the use of pitch or the necessity of finishing or burnishing the articles afterward, and so rapidly and perfectly that work which has heretofore cost twenty dollars can by this process be done in a superior manner for less than one dollar.

It is well known to those skilled in the art that gold, silver, and plated-ware has always heretofore been partially finished, then engraved or chased by hand at great cost of time and labor, as well as risk of injuring the articles, and burnished and finished afterward.

In engraving and otherwise ornamenting such ware by hand the articles are embedded in pitch, which renders it absolutely necessary that the finishing and burnishing of them should be postponed to the engraving, as otherwise the polish would be destroyed by the pitch; and, on the other hand, the engraving preceding the polishing, the latter part of the process is exceedingly liable to deface the work of the former part, and always requires the utmost care, in addition to great skill in the art.

In consequence of these facts the ornamenting of such ware has hitherto been a difficult and costly operation, the designs engraved upon single articles, such as waiters, cake-baskets, &c., often costing the manufacturer twenty dollars or more, thereby materially raising the price of the manufactured article and putting such ware beyond the reach of the masses.

The process which I am about to describe is one which is now in practical operation in Reed & Barton's manufactory in Taunton, Massachusetts, and by which it has been demonstrated that not only can a superior article of manufacture be produced, but it can be produced in so incredibly short a time as actually to diminish the expense of such ornamentation to less than one-twentieth ( $\frac{1}{20}$ ) part of what it has been

up to the present time, and, of course, to enable the manufactured article to be sold at a corresponding reduced price.

The main feature of my process is the production of chased, engraved, or etched ornamental work upon gold, silver, or plated-ware by means of steel dies, or "knots" transferred from dies, moved by the application of machinery, the dies being of the same character as those employed in making bank-notes.

My invention, however, is not confined to the use of such dies, but consists in the process of manufacture, which I will now briefly describe.

I first produce the body of the article by the old methods, striking it up between two dies. I then attach the handles, spouts, ears, &c., if any are to be joined to the body thus made. The article is then polished and thoroughly finished, so that no further burnishing or finishing is necessary in any stage of the process.

It is then held firmly upon a polished steel bed or rest, so applied as to furnish a staunch support to the part which is to be ornamented, and in that position the die, having the design upon its face, is applied to it by means of a drop-press or other machinery.

The die sinks or cuts into the polished surface of the ware, producing therein an exact impression of its face, the lines fully equaling in ornamental beauty the finest chasing or engraving, and being more sharp, clear, and distinct than anything commonly produced by hand. The reverse side of the article will be smooth; not being raised or depressed by the action of the die, will show no traces of the ornamentation upon the other side. In this respect the manufactured article also differs from those produced by hand, the impression of the engraving in the latter class of ornamented ware being distinctly visible on the reverse side of the plate, making it rough and often injuring it for use.

Having thus described my invention,

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

The process of ornamenting gold, silver, or plated-ware, substantially as herein described.

HENRY G. REED. [L. s.]

Witnesses:

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