(No Model.)

J. BAYNES.

METHOD OF MANUFACTURING INLAID ARTICLES.

No. 372,355. Patented Nov. 1, 1887.

Fig. 1.

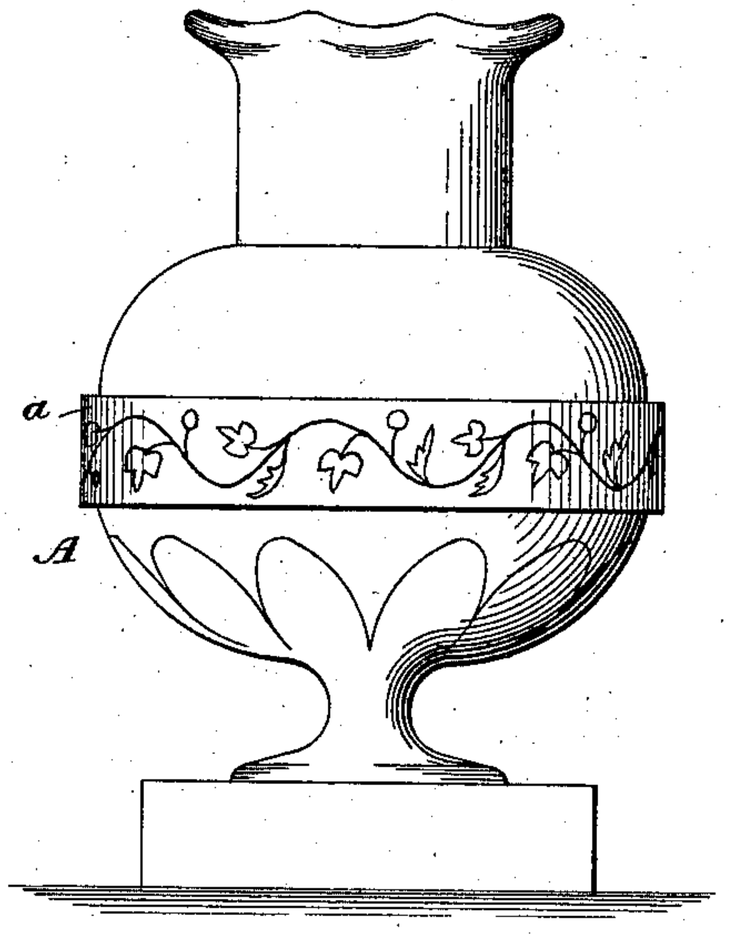
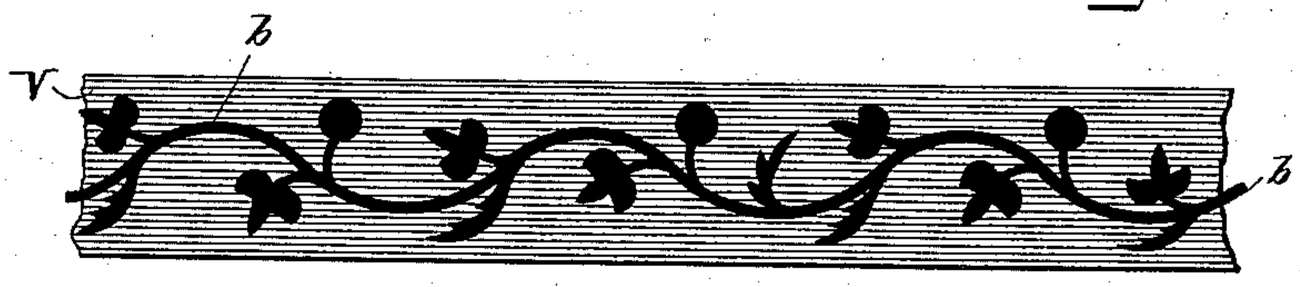


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN BAYNES, OF WESTCHESTER, NEW YORK.

METHOD OF MANUFACTURING INLAID ARTICLES.

SPECIFICATION forming part of Letters Patent No. 372,355, dated November 1, 1887.

Application filed January 18, 1887. Serial No. 224,719. (No model.)

To all whom it may concern:

Be it known that I, JOHN BAYNES, a subject of the Queen of Great Britain, and a resident of Westchester, Westchester county, and State of New York, have invented certain new and useful Improvements in the Manufacture of Inlaid Articles, of which the following is a specification.

My invention relates to the manufacture of that class of ornamented articles in which the ornamentation is effected by inlaying one material in another; and my invention consists in the means, hereinafter fully set forth, whereby the inlay material is made the means of defining its own outline upon a resistant coating applied to the body, so that the latter may be cut away to correspond to the said outline by acid or otherwise to form a socket for the reception of the inlay pattern.

In the drawings, Figure 1 is an external view of a vase illustrating my invention. Fig. 2 is a view illustrating the method of making the inlay pattern.

In the manufacture of certain classes of articles, in which the body material is inlaid with an ornamental material—as, for instance, where one metal, as silver, is inlaid with another metal, as gold, or where a body of ivory is inlaid with metal tracery or a pattern of metal, wood, pearl, or other material—it is common to first draw the design upon the body, cut out the latter to a depth equal to the thickness of the inlaid material, then cut the latter to a form corresponding to the recess in the body, into which it is then inserted and cemented. These operations are tedious and expensive, and necessitate the employment of highly-skilled labor.

In order to obviate the necessity of using skilled labor and simplify and expedite the operations, I first cut out the inlay material in any suitable manner, so as to impart to it the proper shape or form. If, for instance, it is desired to inlay the metallic representation of a vine in the band *a* of a stone vase, A, Fig. 1, I first cut the sheet of metal, V, either by a saw or by any suitable etching or other suitable process, to make a section, *b*, corresponding in form to the shape of the vine which it is desired to represent upon the surface of the vase. I then apply to the surface of the band *a* of the vase any suitable resist susceptible to the action of light—say, for instance, an asphalt resist—and I then apply the metal pattern *b* to the surface of the resist in the position it is to occupy in the finished article, and then subject the exposed portions of the resist to the action of light, whereby they are rendered insoluble. I then remove the pattern-plate *b* and subject the resist to the action of a suitable solvent, by which the soluble portions are dissolved, leaving the surface of the body material exposed in the form of a pattern corresponding to that of the pattern-piece. The exposed surface of the body is then subjected to the action of a suitable acid or other etching material, which eats into the same to a depth corresponding to the strength of the etching material and to the time of exposure. When the body has been etched to a sufficient depth, the etching-fluid is withdrawn, the insoluble resist is removed, and the pattern-plate *b* is applied and cemented in position in the recess corresponding thereto which has been etched into the surface of the body. By this means I am enabled to secure an absolute coincidence of the form of the pattern and the form of its socket to make the pattern the means of forming the socket to receive it, I expedite the operations, and avoid the use of skilled labor, as, with the exception of the making of the original design, all the subsequent operations can be most effectively carried on by unskilled workmen.

I have shown my improvement in connection with the ornamentation of a vase merely for the purpose of illustrating the same; but it is applicable to the ornamentation of various articles of different forms and materials, either in whole or in part. Thus it may be employed in connection with the ornamentation of porcelain, clay, and other tiles or vases, lampshades, plaques, and other articles of porcelain. It may also be employed for ornamenting the pearl or ivory handles of fans or other articles, and in ornamenting articles made of metal, and the inlaid pattern may consist of metal, ivory, pearl, fabrics, or other materials, and in some instances of natural objects themselves.

Although I have referred to the use of acid for eating the exposed surface of the body

portion of the article, it may in some cases be cut away mechanically by means of a sand-blast.

I claim—

1. In the manufacture of ornamental objects having inlaid ornaments, first cutting the inlay material to the desired shape, then coating the articles to be ornamented with a resisting coating sensitive to the action of light, applying the pattern-piece to the coating and subjecting the exposed portions thereof to light, then removing the soluble portions, etching the exposed portions of the article, and then securing the pattern-piece in the socket thus formed in the article, all substantially as set forth.

2. The within-described improvement in ornamenting articles with inlaid materials, the same consisting in applying the inlaying material to a sensitive coating upon the surfaces of the body portion of the article, exposing to light, removing the soluble portion of the sensitive coating, cutting away the exposed face of the article to form a socket, and then securing the inlaying material in said socket, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN BAYNES.

Witnesses:
P. KEMBLE, Jr.,
SPENCER C. DOTY.