

(No Model.)

G. HIRST.

METHOD OF MANUFACTURING INLAID ARTICLES.

No. 285,619.

Patented Sept. 25, 1883.

Fig. 1.

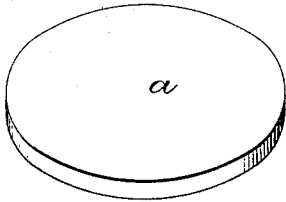


Fig. 2.

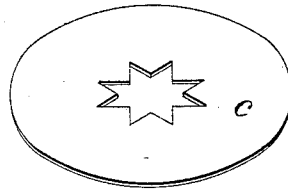


Fig. 3.



Fig. 4.

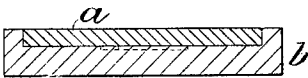


Fig. 5.



Fig. 6.



Fig. 7.

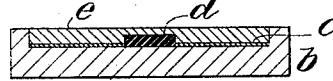


Fig. 8.



Fig. 9.

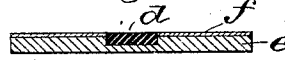


Fig. 10.

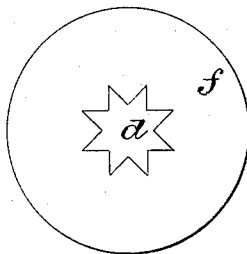
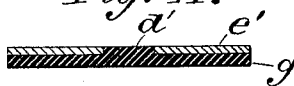


Fig. 11.



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# UNITED STATES PATENT OFFICE.

GODFREY HIRST, OF WHITBY, COUNTY OF YORK, ENGLAND.

## METHOD OF MANUFACTURING INLAID ARTICLES.

SPECIFICATION forming part of Letters Patent No. 285,619, dated September 25, 1882.

Application filed June 20, 1883. (No model.) Patented in England June 2, 1880, No. 2,253, and in France October 5, 1880, No. 138,998.

*To all whom it may concern:*

Be it known that I, GODFREY HIRST, of Whitby, in the county of York, England, have invented a new and Improved Method of Manufacturing Inlaid Articles, of which the following is a full, clear, and exact description.

My invention relates to a new or improved method of manufacturing various inlaid articles; and it consists of producing ornamental, useful, or decorative articles by a process wherein plastic material is cast upon and around a design or device of jet or other material.

The invention also consists of the improved inlaid article.

In practicing my process I make use of a mold of the form of article to be imitated, and also of a templet cut to receive and hold the device or design in the mold; or in place of the templet I may cut or form the design or device in the bottom of the mold where the material of the mold will permit, all as hereinafter described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the model of the object to be imitated. Fig. 2 is a perspective view of the templet. Fig. 3 is a perspective of a star-shaped device or design of jet or other material. Fig. 4 is a sectional elevation, showing the method of making the mold from the model. Fig. 5 is a sectional elevation of the mold, having the templet placed therein. Fig. 6 is a sectional elevation, showing both the templet and device or design placed in the mold ready to receive the plastic material. Fig. 7 is a sectional elevation of the same after the plastic material has been put or poured in the mold. Fig. 8 is a sectional elevation of the plastic material and design removed from the mold. Fig. 9 is a sectional elevation of the same, showing the plastic material coated with varnish, enamel, or other surfacing. Fig. 10 is a plan view of the completed ornament, and Fig. 11 is a sectional elevation, showing a modification.

In carrying out the invention I proceed as follows: I first take an outline model, *a*, in

any suitable material, of the article I wish to produce, and from this model I take a mold, *b*, in sulphur, wax, plaster, or metal in a precisely similar manner to that done in manufacturing statuettes, busts, &c. Into this mold I place a metal templet, *c*, sufficiently large to cover the bottom thereof, or I sink into the mold, when of metal, the form of device or design I require. The mold being thus prepared, I place the design *d*, which may be made of one or more suitably-shaped slabs or pieces of jet, (in this instance I have shown the design in star-shape,) in the mold at the place prepared in the templet or mold to receive it, and when requisite I also place the metallic mounts usually employed in jet-ornament manufacture in the mold. I then fill the mold with any suitable plastic material *e*—such, for instance, as gypsum, or any of its preparations, cement, caoutchouc, celluloid, or the like, colored as may be desired—and employ the usual means to insure the proper and complete filling of the lines and corners of the device or design, such as brushing, shaking, or pressing. I then allow the cast to set or harden.

When the cast is removed from the mold, the jet forming the device or design will be found to project above the surface of the plastic material *e*, as shown in Fig. 8, a distance equal to the thickness of the templet *c* of the depth of the device cut in the metal mold. This difference in level is intended to allow of a coating or a number of coats of any suitable varnish or enamel of the color required being applied to the body of the article, as shown at *f*, Fig. 9, and when sufficiently covered I smooth and level the surface by means of sand-paper, and finally polish with rotten stone, or with whiting.

Instead of enameling or varnishing, the article may be electroplated. When caoutchouc is employed, it is vulcanized after the lines of the design are filled.

In another arrangement or modification I take a slab or piece or a number of slabs or pieces of jet, *g*, Fig. 11, and engrave upon it or thereon any device or design *d'* I desire, and I fill the spaces cut out by the engraving with enamel *e'*, caoutchouc, celluloid, or the like, of the colored desired, after which I sub-

mit the article to a gentle heat, or to both heat  
and pressure combined, as may be requisite  
or necessary. After the drying, or both dry-  
ing and dressing, is or are complete, I grind off  
5 any superfluous portions of the filling on an  
ordinary grindstone, and polish the article in  
the usual way. These slabs or pieces of jet so  
prepared may be embedded in any usual mat-  
rix and employed for ornamenting various ar-  
10 ticles; or each piece may be used as an orna-  
ment for personal wear.

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

15 A method of making inlaid articles, which  
consists in first making an outline model of

the article to be imitated and forming a mold  
thereof; secondly, covering the mold-bottom  
with a templet representing the intended de-  
sign and the suitably-shaped slabs or pieces of 20  
jet; thirdly, forming the body of the article  
in the mold out of plastic material; fourthly,  
coating said body with varnish or enamel of  
the desired color; and, lastly, smoothing and  
leveling the surface of said body, as described. 25

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