C. DOWNS.

MANUFACTURE OF IMITATION JET JEWELRY.

No. 174,497. Patented March 7, 1876.

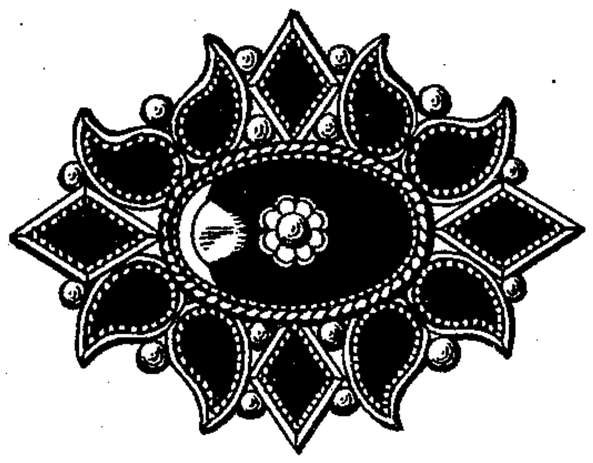

FIG. 1.

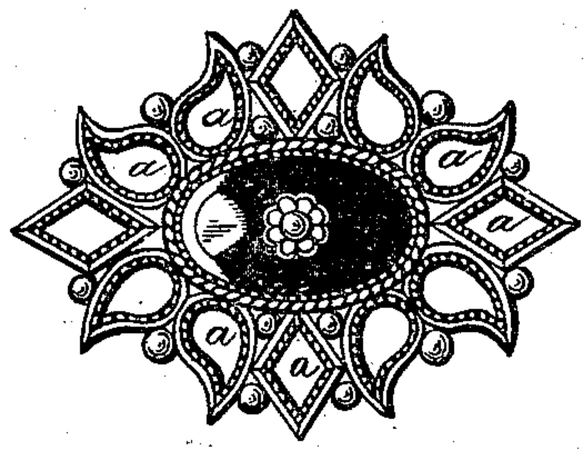

FIG. 2.

WITNESSES:

John D. Thornton

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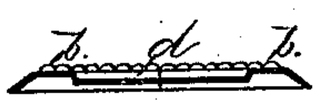

FIG. 3.

INVENTOR:

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UNITED STATES PATENT OFFICE.

CHARLES DOWNS, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN THE MANUFACTURE OF IMITATION JET JEWELRY.

Specification forming part of Letters Patent No. **174,497**, dated March 7, 1876; application filed January 7, 1876.

To all whom it may concern:

Be it know that I, CHARLES DOWNS, of the city and county of Providence and State of Rhode Island, have invented certain new and useful Improvements in the Manufacture of Imitation Jet Jewelry; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 represents a breast-pin, constructed after my improved method, and having the recessed spaces in the frame-work, shown at Fig. 2, filled with any suitable enameling composition. Fig. 2 is a view of the metallic frame without the enamel. Fig. 3 is a section of one of the recessed spaces to be filled with enamel, showing the raised bead-work surrounding the same.

The purpose of my invention is to produce articles of jewelry, as, for example, breast-pins, ear-rings, bracelets, studs, sleeve-buttons, &c., which shall clearly resemble in appearance articles of similar form which are ornamented with real stones set by hand, by substituting for such stones a vitreous enamel, which is fusible under a degree of heat considerably less than the metal frame which is to be so ornamented can bear, and by constituting such frame so that the enamel, when fused, shall, from the character of the recess which it is to fill, assume a convex surface, and have the appearance at the edge of having been set by hand.

In the first place, I construct a frame of proper form and configuration for the article of jewelry required. A frame for a breast-pin is shown at Fig. 2. This is made by the process of striking up the same from sheet metal by the action of dies. The peculiarity of this part of the improvement is that around the edge of each open space *a*, which is afterward to be filled with enamel, a beaded edge, *b*, (Fig. 3,) is formed by the shape of the dies. The office which this edge, so shaped, performs is important. In the first place, it is in exact imitation of the effect which is produced by the hand-tool used to set a real stone, but principally it is important in causing the enamel, when fused, to assume a convex surface, the roughened or beaded edge obstructing the easy flowing of the enamel in all directions, as with a smooth edge it would do, and giving it a tendency to take on a globular form. Each one of the spaces *a* to be filled with enamel is recessed, as seen at *c*, (Fig. 3,) and a back plate or lining is soldered on the back side of the frame in the usual way.

After the frame has been constructed, and either before or after the backing-plate has beed soldered to it, the several recessed spaces *a* are furnished with the required quantity of fusible enamel, and the article is placed in a muffler and subjected to the requisite heat of a furnace to melt the enamel and cause it to fill the recess in the manner above described.

I am aware that fusible enamel has heretofore been frequently applied to ornament articles of jewelry; I therefore do not claim the use of this material broadly for the purpose of ornamentation; but

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

The improvement in the art of manufacturing imitation jet-jewelry, which consists in striking up, by means of suitable dies, a frame with recesses to receive a fusible enamel, forming the edges of such recesses beaded or serrated for the purpose described, and filling such recesses or portions to be ornamented with enamel to be fused under the action of heat, substantially as specified.

CHARLES DOWNS.

Witnesses:

JOHN D. THURSTON,

THOMAS F. COSGROVE.