(No Model.)

H. E. OSBORN.

PROCESS OF PRODUCING ORNAMENTAL OPEN WORK SURFACES ON METAL.

No. 455,051. Patented June 30, 1891.

Fig. 1.

Fig. 2.

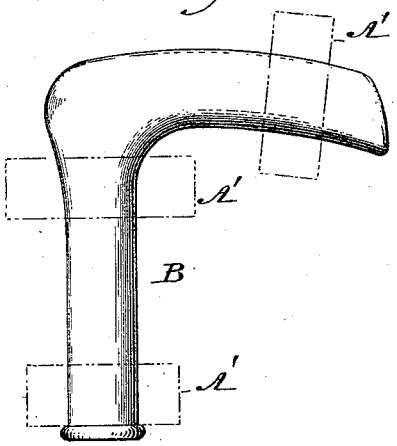


Fig. 3.

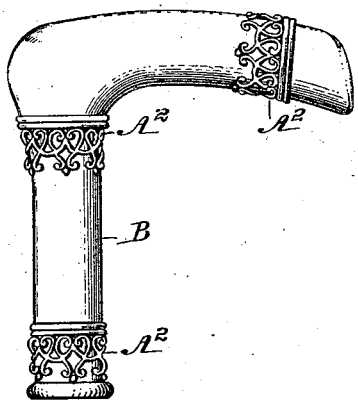
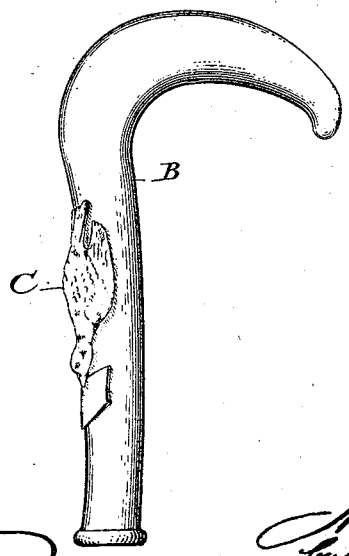


Fig. 4.



Witnesses:
John R. Nolan
C. W. Beck.

Inventor:
Henry E. Osborn
by his Att'y, H. H. Lawton

UNITED STATES PATENT OFFICE.

HENRY E. OSBORN, OF LANCASTER, PENNSYLVANIA.

PROCESS OF PRODUCING ORNAMENTAL OPEN-WORK SURFACES ON METAL.

SPECIFICATION forming part of Letters Patent No. 455,051, dated June 30, 1891.

Application filed December 18, 1890. Serial No. 375,078. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. OSBORN, a citizen of the United States, residing in the city of Lancaster, State of Pennsylvania, have invented a certain new and useful Process of Producing Ornamental Open-Work Surfaces on Metal, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

The object of my invention is to produce upon metal surfaces, such as umbrella and cane handles, which are usually made of soft white metal, an ornamental open-work surface; and to that end my invention consists in the several steps of applying to the rough-cast handle with its plain surface of a separate sheet or strip of ornamental metal, then soldering the same thereto, then preparing it for plating, and afterward plating the whole, and the result of my invention is to produce a sharper and more effective resultant ornamentation on the surface than by the old method of having the ornamentation originally cast on and with the handle.

In the accompanying drawings, illustrating my invention, Figure 1 represents a thin sheet or strip of metal of filigree, open, or pierced work. Fig. 2 is an elevation of a plain handle before the strips of metal are applied to it. Fig. 3 represents in elevation a cane or umbrella handle with the metallic ornament applied to it and the handle finished. Fig. 4 represents in elevation a handle in the rough and before finishing, showing by contrast the old mode, in which the ornamentation is cast thereon as part of it.

By reference to Fig. 4 of the drawings, which illustrates the old mode of producing upon cast-metal handles or other metallic surfaces a raised surface ornamentation, is shown a rough casting of a handle B, with the ornamental raised surface C formed thereon as part of it in the mold. In order to finish the ornamental portion C of such a handle to prepare it for plating, it was necessary to remove therefrom all the rough surfaces and fins from the molding, and in consequence thereof much of the sharpness of the molded ornament was lost and its finish deteriorated.

My process of producing such ornamentation, either raised or depressed, by the application of strips of metal of filigree, open, or pierced work consists of the following steps, viz: The handle B, Fig. 2, is first cast from a brass mold, as usual, then trimmed and buffed perfectly smooth, when it is ready for applying the ornamentation desired. Should the latter be such as shown in Fig. 1, which is a flat piece of thin metal of filigree, open, or pierced work, it is then applied to the handle B of Fig. 2 at the parts A′, in order to produce the finished handle B, with its ornamentation A^2. (Shown in Fig. 3.) The rough casting B, Fig. 2, being prepared as aforesaid, the sheets or strips of metal A are cut into strips or pieces A′, of sufficient size to encircle the handle or to cover the part to be ornamented, then applied thereto and the parts brazed together. The two metals are then amalgamated by the usual soldering process, when the handle is again trimmed and buffed and made ready for gold or silver plating. The final step of plating which thus covers the originally smooth cast handle and its applied pieces or strips of ornamental open-work metal converts the whole into a homogeneous structure.

The result of this process of producing an ornamental surface of open or pierced work upon metallic structures is to very materially reduce the cost of producing open-work ornamentation of metallic surfaces, as well as to produce a sharper and more effective product and a greater variety of resultant ornamentation than by the old method of having the ornamentation cast on and with the body of the handle.

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

The process described of producing ornamental open-work surfaces on metallic substances, such as cane or umbrella handles, consisting of first casting with a smooth surface and buffing the article to be ornamented, then preparing a thin flat strip of ornamental metal of filigree, open, or pierced work, applying the same to the surface of the casting and amalgamating the same therewith, and finally plating the whole to produce a homogeneous product, substantially in the manner and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature this 12th day of December, A. D. 1890.

HENRY E. OSBORN.

Witnesses:

DAVID L. DEEN,

H. T. FENTON.