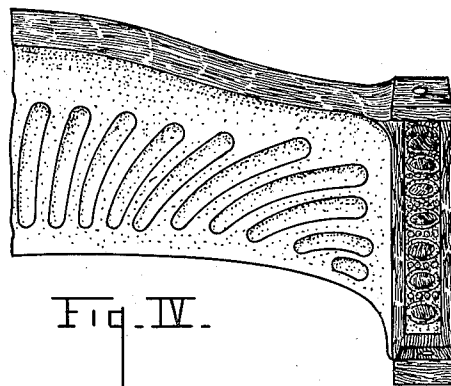
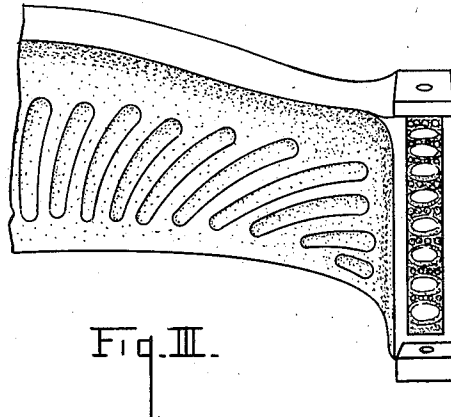
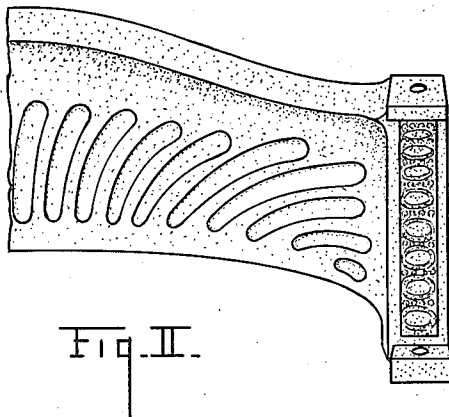
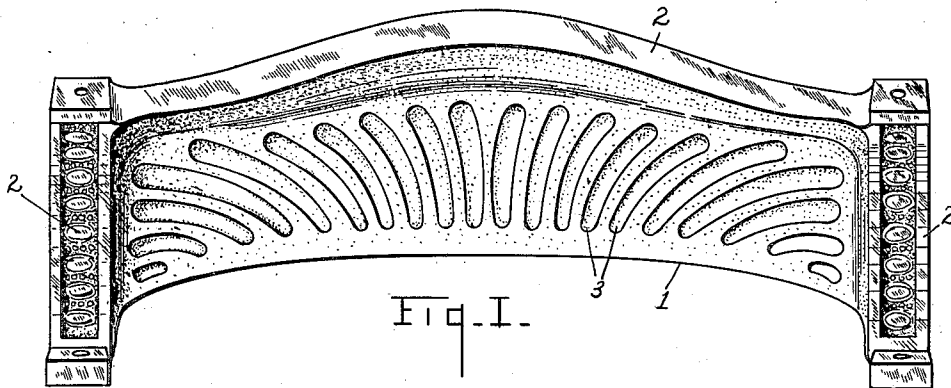


A. H. HUMPHREY.
METHOD OF FINISHING METAL SURFACES.
APPLICATION FILED DEC. 31, 1918.

1,373,430.

Patented Apr. 5, 1921.



WITNESSES:

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METHOD OF FINISHING METAL SURFACES.

1,373,430.

Specification of Letters Patent.

Patented Apr. 5, 1921.

Application filed December 31, 1918. Serial No. 269,139.

To all whom it may concern:

Be it known that I, ALFRED H. HUMPHREY, a citizen of the United States, residing at the city, county, and State of New York, have invented certain new and useful Improvements in Methods of Finishing Metal Surfaces, of which the following is a specification.

This invention relates to improvements in the method of finishing metal surfaces.

The main object of this invention is to provide an improved method or process of finishing metal surfaces, for example, stove parts and the like, which enables the economical production of such parts with superior and attractive finishes.

A further object is to provide an improved method or process of finishing metal surfaces with a combination of enamel and metal plating.

Further objects and advantages will appear from the detailed description to follow, and in the accompanying drawing I illustrate the important steps of my improved method.

Figure I is a front perspective of a stove part finished by my improved method.

Fig. II is a detail front elevation of the stove part shown in Fig. I with a coating of enamel applied thereto.

Fig. III is a detail front perspective similar to Fig. II, showing another step of my method, the enamel having been removed from the raised portions of the surface.

Fig. IV is a similar detail perspective after the surface has been subjected to an electroplating bath.

In the drawing similar reference characters refer to similar parts throughout the several views.

The object illustrated in Fig. I of the drawing is a stove part 1 coated with enamel except portions 2, indicated as polished, these portions being, in the structure illustrated, raised portions, although the surface has other raised portions, such as 3, which are shown as coated with enamel.

In carrying out my improved method or process I coat the surface to be ornamented with suitable enamel, remove the enamel from the raised or other portions which it is desired to plate, and subject to an electroplating bath. The enamel may be removed from the raised portions or other portions

which it is desired to plate by wiping before firing, and then firing. The raised or other portions which it is desired to plate are then ground or polished so as to remove all particles of the enamel and prepare the surface for the plating. The article is then subjected to an electroplating bath which coats the raised or exposed portions of the metal after which the plated portions are polished or finished as desired.

The process may be carried out by omitting the step of wiping off the enamel before firing and all the enamel removed by grinding and polishing, although the wiping saves time in the grinding or polishing step preparatory to the electroplating.

In the drawing I have illustrated in Fig. I the finished article with the raised portions plated and polished. In Fig. II the first step, that is, the surface with the enamel applied thereto. In Fig. III the third step, generally speaking,—the article with the enamel removed from the portions to be plated, and in Fig. IV the article plated.

My improved method or process is applicable for the ornamentation of various surfaces but is particularly desirable for the ornamentation of stove parts and other relatively large surfaces where an ornamental finish is desired and at the same time it is quite necessary to produce economically.

While my improved process is particularly desirable and used by me in finishing surfaces with enamel and metal plating, other materials than enamel which provide a permanent finish and are non-conducting and unaffected in the electroplating process might be employed.

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

1. The method of finishing metal surfaces having raised portions consisting of coating with enamel, wiping the enamel from the raised portions, firing, polishing the raised portions, subjecting to an electroplating bath whereby the portions freed from the enamel are plated, and polishing the plated surfaces.

2. The method of finishing metal surfaces having raised portions consisting of applying enamel to the surface, removing the enamel from the raised portions, subjecting the surfaces to an electroplating bath where-

by the raised portions are plated, and polishing the plated portions.

3. The method of finishing metal surfaces having raised portions consisting of applying enamel to the surface, removing enamel from the raised portions, and subjecting the surfaces to an electroplating bath whereby the raised portions are plated.

4. The method of finishing metal surfaces consisting of applying a coating of enamel, removing the enamel from portions of the surface, subjecting to an electroplating bath whereby the portions freed from the enamel are plated, and polishing the plated surfaces.

5. The method of finishing metal surfaces consisting of applying a coating of enamel, removing the enamel from portions of the surface, and subjecting to an electroplat-

ing bath whereby the portions freed from the enamel are plated.

6. The method of finishing metal surfaces consisting of applying a coating of permanent non-conducting composition which is not affected when the surface is subjected to an electroplating solution, removing the composition from portions of the surface to be plated, and subjecting to an electroplating bath whereby the portions freed from the composition are plated.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

ALFRED H. HUMPHREY. [L. s.]

Witnesses:

HAROLD E. HUMPHREY,
J. P. CONROY.