(No Model.)

O. R. INGERSOLL.

METHOD OF ENAMELING METALLIC SURFACES.

No. 300,711. Patented June 17, 1884.

Fig. 1.

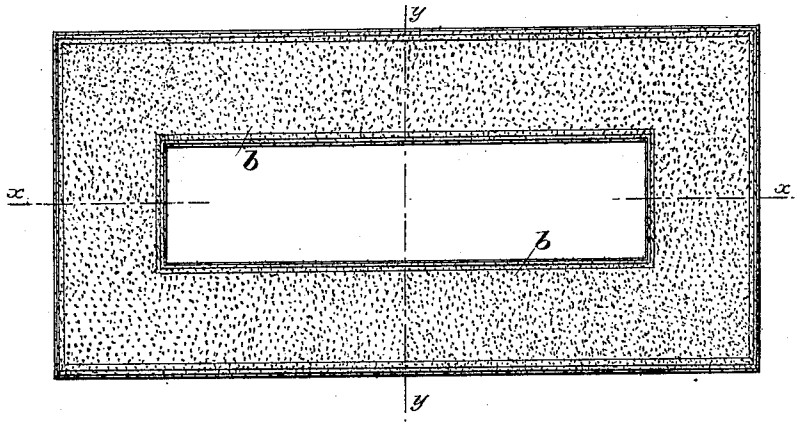
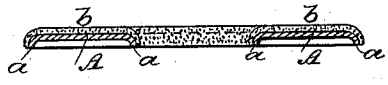


Fig. 2.



Fig. 3.



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UNITED STATES PATENT OFFICE.

OLIVER R. INGERSOLL, OF BROOKLYN, ASSIGNOR TO THE NATIONAL ENAMEL LETTER AND NUMBER COMPANY, OF NEW YORK, N. Y.

METHOD OF ENAMELING METALLIC SURFACES.

SPECIFICATION forming part of Letters Patent No. 300,711, dated June 17, 1884.

Application filed May 5, 1884. (No specimens.)

To all whom it may concern:

Be it known that I, OLIVER R. INGERSOLL, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Method of Enameling Metallic Surfaces; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of a metal plate having on its surface a vitreous enamel. Fig. 2 is a longitudinal section of the same, and Fig. 3 is a transverse section.

My invention relates to the application of vitreous enamel to metallic surfaces, as is required for a great variety of purposes in the arts.

Heretofore only the most skilled enamelers could successfully apply a porcelain enamel to metal plates, sheets, or strips having an absolutely plane or flat surface, and the skilled enamelers enabled to do this class of work have commanded the very highest wages. Moreover, such plates when enameled are exceedingly liable to fracture of the enamel in transportation and handling, and it would seem that the unequal expansion and contraction of the enamel and metal had something to do with the exceedingly easy fracture of the enamel. It has been necessary in the handling of such flat plates heretofore to carefully wrap each article in separate packing or sheets of paper before placing them in a box or other package for transportation, and even then the breakage has been of a ruinous percentage. I have discovered that by depressing or striking down in a slight curve the edges of such thin metal plates not only can enamelers of ordinary skill enamel the plates readily, but that the enamel is much less liable to fracture from any cause superinduced by ordinary use in the arts; but, furthermore, that the enameled plates can be placed in boxes and kegs without any intermediate wrapping or packing, and transported with little or no loss from breakage of the enamel. I do not pretend to offer any technical explanation or theory as to why this new construction or method of enameling produces the marked advantageous results recited; but I have fully and completely demonstrated the utility and practical advantages of my new method by practical experiments and manufacture.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is a metal plate to which the enamel is to be applied. This plate may be struck with a die, or otherwise made, so that its edges are depressed or curved, as seen at *a a*, below the general plane of the plate. In this condition any enameler of commonplace skill can apply a coating of enamel, *b*, to the surface, and it will adhere with great tenacity. The enameled surface answers substantially all desirable purposes in the arts, and, as I have fully discovered by experiment, the plates can be transported readily with much less liability to fracture from handling or jars and shocks of trains.

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

The novel method of enameling metal plates, consisting, essentially, in striking the edge of the plate *a a* below the general plane of the body of the plate and then applying the enamel to the plate, substantially as set forth.

OLIVER R. INGERSOLL.

Witnesses:
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