

UNITED STATES PATENT OFFICE.

HENRY AIKEN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN ALLOYS FOR PRODUCING ORNAMENTAL COATINGS ON METALS.

Specification forming part of Letters Patent No. **137,279**, dated April 1, 1873; application filed February 21, 1873.

To all whom it may concern:

Be it known that I, HENRY AIKEN, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in the Art of Making Ornamental Castings; and I do declare that the following specification contains a correct description of the mode of operating the same.

My object is to produce castings in an alloy which, when cold, presents various colors and shades of color for coating various useful and ornamental articles of metal, such as inkstands, paper weights, &c.

I use an alloy which, for ordinary use, may be compounded in about the following proportions: Of antimony, forty-four parts; of zinc, forty parts; of tin, twelve parts; and of copper, eight parts.

The composition may be greatly varied, however. The copper may be omitted entirely; or the copper, and tin, and antimony, and zinc, in equal parts, may be employed; or the proportions varied from one-fourth to three-fourths of either. Peculiar effects may also be produced by adding bismuth to the composition.

The metals used are melted in a crucible, and, when fluid, poured through the air into open molds, or over the surface of the article to be coated, so as to cause the different por-

tions to harden at different times and temperatures, by which means a great variety of colors may be produced in a single article.

The alloy may, while in a plastic state, be compressed in molds and still retain, when cold, its varied richness of color.

By this means I am enabled to produce ornamental articles with a very great variety of colors and shades of colors.

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

1. The mode of making ornamental castings by pouring a melted compound of metals, substantially as set forth, in the open air into open molds or onto forms.

2. The mode of making ornamental castings by casting an alloy of metals, substantially as described, in open molds, or over forms and then molding by compression.

3. The alloys of zinc and antimony with or without tin or copper, for producing colored castings, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY AIKEN.

Witnesses:

R. MASON,
B. EDW. J. EILS.