

UNITED STATES PATENT OFFICE.

WILBUR TOPPING, OF HARVEY, ILLINOIS.

COMPOSITION OF MATTER FOR ENAMELING METAL WARE.

SPECIFICATION forming part of Letters Patent No. 663,618, dated December 11, 1900.

Application filed October 23, 1899. Serial No. 734,541. (No specimens.)

To all whom it may concern:

Be it known that I, WILBUR TOPPING, a citizen of the United States, residing at Harvey, in the county of Cook and State of Illinois, have invented a new and useful Composition of Matter to be used for Enameling Metal Ware, of which the following is a specification.

My composition consists of the following ingredients combined in substantially the proportions stated, viz: borax, sixty-one parts, by weight; feldspar, seventy-one parts, by weight; quartz, forty-four parts, by weight; fluor-spar, fifteen parts, by weight; soda, fourteen parts, by weight; saltpeter, eleven parts, by weight, adding to these a sufficient quantity of bone-ash or pipe-clay or any similar substance to give the mass the desired consistency and oxids in fair proportion if it be desired to color the mixture. These ingredients having been thoroughly mixed are molten together and ground with water. The quantity of pipe-clay or similar substance used is determined by the consistency desired to give the mass, while it is only limited by the ability of the mass to flux it. The quantity of liquid to be used is likewise governed by the consistency desired to be given the mass.

In using the above-described composition so as to obtain the most satisfactory results the metal article to be enameled should first be carefully cleaned and prepared, so that it presents a suitable surface for the reception of an enameling-coat. A coat of the enameling mixture above described is then applied in any suitable manner, preferably by dipping, and the excess coating material (if any) removed in any of the well-known ways. Said coating may then be dried and fused; or to said coating and while the same is wet a second and coloring-coat or partial coat may be applied and thereafter said two coats simultaneously dried and fused; or said first

coat having been dried a second and coloring coat or partial coat may be applied, dried in any suitable manner, and thereafter the two coats simultaneously fused; or any desired number of enameling mixtures having substantially the same proportions as hereinbefore specified, any number of which may contain coloring-matter, may be simultaneously applied to the steel surface to be enameled and thereafter dried and fused; or to the coating of the specified enameling mixture while the same is still wet or after it has been dried or dried and fused any number of coloring-coats, or partial coats, or finishing-coats may be applied in any of the well-known ways.

By using the above-specified composition I produce commercially satisfactory enameled ware requiring but one fusing.

If an article of extremely-high finish be desired, it may be obtained by applying an additional or finishing coat to the fused first coating and fusing it thereon.

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

1. The herein - described composition of matter consisting of borax, feldspar, quartz, fluor-spar, soda, saltpeter, pipe-clay, or similar substance, and water, or other suitable liquid, substantially as, and for the purpose, described.

2. The herein - described composition of matter for enameling metal ware, consisting of sixty-one parts by weight borax, seventy-one parts by weight feldspar, forty-four parts by weight quartz, fifteen parts by weight fluor-spar, fourteen parts by weight soda, eleven parts by weight saltpeter, pipe-clay, or similar substance, and water, substantially as, and for the purpose, described.

WILBUR TOPPING.

Witnesses:

CHARLES S. HILL,
M. A. KENNEDY.