UNITED STATES PATENT OFFICE.

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COATING FOR PROTECTING BRONZE SURFACES.

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To all whom it may concern:

Be it known that I, OSCAR HOMMEL, a citizen of the United States, and a resident of Pittsburgh, county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvements in Coating for Protecting Bronzed Surfaces, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to a new method and an improved composition for protecting surfaces covered or treated with bronze powders or metal leaf. In this connection bronze powder is a general term used in the trade for referring to all classes of powder or ground metal, such as copper, brass, bronze, aluminum, tin, etc., or alloys of these metals, and is not limited to bronze alloy alone, as would ordinarily be indicated by the term. In the following description of my invention I use the words "bronze powder" and the word "bronzed" as indicating this general treatment for surfaces.

My invention deals with a composition and a method of applying the same which may be used as a coating for the bronzed surface, and one which protects the coating from the action of the atmosphere, without in any way acting upon the alloy itself, or the vehicle in which the alloy is usually applied to the surfaces to be coated.

To the accomplishment of the foregoing and related ends, said invention, then, consists of the means and ingredients hereinafter fully described and particularly pointed out in the claims.

The following description sets forth in detail certain ingredients constituting the composition embodying the invention, and the means for applying the same, such combined ingredients and disclosed means constituting, however, but one of various forms in which the principle of the invention may be used.

Bronze powders as now generally used, do not give a permanent surface as the powder is affected by the atmosphere and is thus tarnished and made to lose its brilliancy. In order to protect a bronzed surface, it is generally coated with some sort of varnish or lacquer which excludes the air from the bronze powder and thus prevents tarnishing of the same under atmospheric action. This method of protecting the bronzed surfaces is, however, not satisfactory, as the solvents contained in the varnish or other coating will uniformly re-act with the vehicle in which the bronze powder is applied, to change the appearance and brilliancy of the bronzed surfaces.

My new composition is adapted to protect a bronze surface by application as a coating thereover, thus preventing atmospheric action on the surfaces, but my composition contains no ingredients which will in any way re-act with either the bronze powder or the vehicle in which it is applied, to the detriment of the surfaces. Furthermore, my improved method is much simpler than the former process of coating.

My composition comprises a wax or resin, or a mixture of one or more of each, which is then treated with a suitable solvent, preferably turpentine, although either benzin or benzol may be used if desired, in sufficient quantity to form a relatively thick paste, when such paste may be applied by rubbing the paste over the bronzed surface with a cloth. For certain purposes, the paste may be made thinner and may be applied with a brush. A very satisfactory coating may be secured by sprinkling the wax, or mixture of waxes, in powdered form over the bronzed surfaces. This is followed by a rubbing down of the powder until a protective coating is produced over the entire surface.

The preferred composition comprises bees-wax, carnauba wax and turpentine in the proportions of five, one and a quarter and seven by weight. These compositions may be varied and to the wax may be added one or more resins for certain purposes, if desired. In certain instances, such for example as upon bronze surfaces used on piano plates, it may be desirable to use a composition consisting of bees-wax, carnauba wax and olive oil.

By the use in the manner specified of my new composition it is possible to protect bronzed surfaces from tarnishing or other harmful action and this is an important advance in this art, as heretofore it has been impossible to preserve a bronzed surface at its best for any considerable period without varnishing or lacquering. With my new method of protecting it, however, it can be

maintained at its original finish for a very long time.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the process herein disclosed or the materials employed in carrying out the process, provided the step or steps stated by any of the following claims or the equivalent of such stated step or steps be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. The combination with an article having a bronzed surface of a coating thereon comprising bees-wax and carnauba wax partially dissolved in about an equal amount of turpentine.

2. The combination with an article having a bronzed surface of a pasty coating thereon comprising five parts of bees-wax and one and one-quarter parts of carnauba wax dissolved in seven parts of turpentine.

Signed by me, this 29 day of October, 1914.

OSCAR HOMMEL.

Attested by—
D. L. DAVIES,
A. L. GILL.