

# UNITED STATES PATENT OFFICE.

WALERIAN PIOTROWSKI, OF NEW YORK, N. Y.

## IMPROVEMENT IN PAINTING AND VARNISHING WOOD AND METALS.

*Specification forming part of Letters Patent No. 62,222, dated February 19, 1867.*

*To all whom it may concern :*

Be it known that I, WALERIAN PIOTROWSKI, of the city of New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Painting and Varnishing Wood and Metals for Carriages, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof.

Heretofore it has been the usual and general practice, in painting and varnishing the wood of the body of carriages, &c., to fill and cover the grain of the wood with several successive coatings of lead colors, and upon it several coats of "rough-stuff" or "English filling," thus obtaining upon the wood a thick, stiff, and unelastic coating, which is afterward to be rubbed down with pumice-stone and water until it presents a perfectly even and smooth surface—a very laborious and tedious operation. This being done, a thin coat of lead color is put on, and, on being dry, rubbed down with fine sand-paper, when the surface is properly prepared to receive the coatings of finishing-colors and varnishes, so that, giving sufficient time for the proper drying of the various layers of lead colors, &c., forming the thick ground-coatings, for the proper rubbing down and rendering smooth and even said ground-coatings ready to receive the finishing-colors and varnishes, and for the drying of the layers of finishing-colors and varnishes, it takes usually from two to three months to paint a carriage, and at the expense of much and tedious labor.

A very serious defect and disadvantage of using lead colors is, that after a carriage has been used for some time, exposed to the changing influences of sunshine and rain, of heat and cold, the stiff and unelastic coating of lead colors becomes cracked, giving an unseemly appearance to the painting.

The object of my invention is to simplify and render much cheaper and less laborious the whole process of painting, to shorten considerably the time required for painting a carriage, to dispense with the use of lead colors, and to obviate in a measure the untimely cracking of the coating of paint when exposed to the changing influences of weather; and the nature of my invention consists in preparing the surface of the wood ready to receive the finishing colors and varnishes

by imbuing the wood with a liquid composition of my invention, which penetrates and fills the fibers, and, when dry, renders the wood sufficiently hard and tough, though elastic, and of such consistency that on being suitably rubbed down with pumice-stone, &c., a perfectly even and smooth surface is obtained, and of a proper condition to apply directly upon it the finishing-colors and varnishes, without any danger of the grain of wood warping on said finishing-colors or varnishes being thus applied.

To enable others skilled in the art to make and use my invention, I will now proceed to describe it more in detail.

The wood to be painted is first to be smoothed with pumice-stone, sand-paper, or other similar substances.

I then apply my liquid composition, which penetrates and fills the fibers of the wood. If deemed necessary, two applications of the liquid may be made, to cause the fibers to be more thoroughly imbued with the liquid; and after properly drying, the wood is suitably rubbed with pumice-stone, &c., until it presents a perfectly even and smooth surface, my liquid, with which the fibers are impregnated and filled, having given to the wood on drying that requisite stiffness and consistency to render it capable of a superior finishing and smoothness of surface, and free of any liability of the grain warping on the application of colors or varnishes.

The surface of the wood, being thus prepared, is now ready to receive the finishing-colors and varnishes, which may be applied and treated in the usual manner.

My liquid composition which I employ for such preparation of the surface of wood consists, mainly, of linseed-oil and asphaltum, incorporated and combined together by a protracted action of heat; but as this constitutes a separate and distinct branch of my invention, it is not deemed necessary here to give a detailed description of the manner or process of compounding and preparing the same.

From the foregoing description it will be readily seen that the whole process of painting is thus greatly simplified. The painting of a carriage upon this plan may be wholly finished in about three weeks' time, and it requires much less labor to effect it, though the painting presents a superior finish. Another



great advantage is, that the so-painted carriage is less liable to have its paint cracked, as the ground surface upon which the finishing-colors are applied consists of but a thin and elastic film intimately incorporated with the fibers of the wood, while in carriages painted upon the present plans the stiff and unelastic ground-coating of lead colors, &c., is the principal cause of cracking on exposure to the changing influences of weather.

A carriage painted on my plan presents the further advantage that after it has been used for a considerable time and requires a renovating of the paint, the same may be effected with but little trouble and pains, it being only necessary to rub off the finishing-colors and varnishes, and the fresh ones may be applied, while in carriages painted on the present plans it is necessary not only to rub off the finishing-colors and varnishes, but also the ground-coating of lead colors, and to effect which it is necessary to use heated irons—a very long and tedious operation—and then a fresh ground-coating of lead colors has to be again formed to prepare

the surface *de novo* for the reception of the finishing-colors and varnishes.

My plan of painting is also applicable to metals, my liquid composition being used to prepare the surface for the reception of the finishing-colors and varnishes; and, as it is elastic, it yields to the expansions of metal, and is less liable to crack than lead colors.

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

The new mode of preparing the surface of wood and of metals ready for the reception of finishing-colors and varnishes, substantially as herein described, for the purpose of simplifying, shortening, and cheapening the whole process of painting wood and metals for carriages, &c., and to obviate in a great measure the cracking of the coat of paint when exposed to the influences of weather.

WALERIAN PIOTROWSKI.

Witnesses:

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