

UNITED STATES PATENT OFFICE.

MANUEL DOCTUS FERNANZO, OF PHILADELPHIA, PENNSYLVANIA.

ART OF FINISHING WOOD SURFACES.

SPECIFICATION forming part of Letters Patent No. 508,875, dated November 14, 1893.

Application filed February 2, 1893. Serial No. 460,732. (No specimens.)

To all whom it may concern:

Be it known that I, MANUEL DOCTUS FERNANZO, a citizen of the United States, and a resident of Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Improvement in the Art of Finishing Wood Surfaces, (for decorative and preservative purposes,) whereof the following is a specification.

In the ordinary treatment of natural wood surfaces which are intended to be finished by varnish, it has heretofore always been customary to apply to the surface, before the varnishing process, what is technically known as a "filler," whose object was to charge the pores or grain of the wood, both at the immediate surface and adjacent thereto, with a permanently absorbed material, not itself a varnish. Such fillers are very numerous, and differ widely in the character of their constituents, but their purpose and effect are substantially the same, viz: first, to diminish the absorbent power of the wood, in order to economize varnish, and render the wood less liable to be affected by change of temperature and exposure to moisture; and, second, to fill up inequalities in the surface, so that it may present a smooth basis for polishing and finishing. With the utmost care in the application of such fillers, even when preceded by thorough drying of the wood, it is very difficult to obtain a varnished surface which will remain unchanged under exposure to dampness and varying temperatures, the varnished coating being very liable to "check," crack or sweat, and furthermore a great deal of varnish is required to produce a high finish. I have discovered that by the interposition, between the coats of varnish and the wood surface, of a thin sheet of paper, permanently and closely applied to the wood by suitable glue or cement, all the good effects of a filler can be obtained without any danger whatever of checking, cracking or sweating, and that a much less quantity of varnish is required to obtain a high degree of polish in the finished product. The paper becomes translucent, by absorption of the varnish, to such an extent that the grain of the wood is, for all practical purposes, entirely visible, so that there is no

substantial impairment of the natural effect of the wood surface, and at the same time any inequalities of the surface itself are masked. Thus the process has a double economy, in that not only is the filler dispensed with and the requisite quantity of varnish diminished, but the previous treatment of the wood for finishing its surface requires much less care, time and expense.

I prefer to use, for ordinary wood surfaces, a thin, brownish or yellowish paper of good quality, and apply it to the wood by any good cement or glue, preferably of a non-hydroscopic character. Said paper should be of such character that if not transparent to the required degree in the first instance, it shall be capable of becoming so upon the application of the varnish, and in using the word transparent in my claim I wish it to be understood as comprehending such characteristics. After the paper coating has thoroughly dried in position, and has become practically integral with the wood, I apply the first coat of varnish, which should be carefully rubbed down in the usual way, to be followed by one or more coats until the requisite finish is obtained. Actual tests of wood thus finished, show that the most trying variations of temperature and exposure to atmospheric moisture, fail to disturb the coating or produce any checking, cracking or sweating effect in the varnish, so that my invention is adapted, not only for the finishing of surfaces which are to be protected from the weather, but can be employed for outdoor work.

I am of course aware that it is not new to varnish a paper surface, as wall papers have often been treated is this way with a view to obtaining a polished effect or to preserve the paper against dampness. Hence I do not broadly claim the idea of varnishing upon paper. Such use of varnish, however, was merely decorative, and was not intended to attain, nor did it in fact attain, a result analogous to that of my invention, since the paper was not used as a substitute for a filler, but with a view of concealing the subjacent surface, and of itself formed the actual surface to be decorated.

I claim—

As an improvement in the art of finishing wood surfaces, the hereinbefore described process of first applying to such surface a coating of substantially transparent paper
5 closely adhering thereto, and then varnishing the combined surface to the requisite degree of polish, whereby the use of a filler is dis-

pensed with and the appearance of the natural grain of the wood retained, substantially as set forth.

M. DOCTUS FERNANZO.

Witnesses:

CHAS. F. MYERS,
JAMES H. BELL.