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TRANSFER FOR APPLYING DESIGNS TO WOOD AND OTHER SURFACES

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3 Claims. (Cl. 41—33)

The invention relates to a transfer design and a process, characterized by employing as intermediate support a foil of cellulose derivatives—particularly cellulose acetate—on which the colours are printed directly in the form of printing colours, and which is applied to a smoothly polished support by means of pressure and heat.

It is already known to produce imitations of valuable wood, inlay work and other pictorial ornamentation on wood and other surfaces by applying suitable prints to less valuable wood and the like. In this case, it has appeared necessary to employ transfer designs in which the colours are backed by an opaque covering layer which had to be applied to a surface specially pre-treated by etching, lacquering, varnishing or polishing. It was, however, only possible technically to employ transfer designs of small size.

In order to be able to provide also large surfaces with pictorial ornamentation, ordinary paper which had on its surface any design in detachable colours (in the form of oil colours and the like) has been placed with this surface on the wood to be ornamented and both pressed together at an elevated temperature (at least 80° C.) and simultaneous powerful pressure (up to about 30 kilograms per square centimetre). The intention was in this way to cause the colours to be transferred from the support to the wood, which, after removal of the paper, was to remain capable of being polished. In this case, however, it has been found that the paper retained some of the colour which had been absorbed by the paper fibre, and for this reason the design on the wood always appeared pale.

In order to obviate this disadvantage, real transfer paper has been employed in place of ordinary paper. Since the layer of gum on the said transfer paper did not take printing colours, the surface was first provided with a layer of varnish which took the printing colours. On the colours now printed a second layer of varnish was provided. The backing of an opaque covering layer had been intentionally omitted in order in places to expose the wood support and in places to allow it to appear through. This transfer design was pressed by means of pressure and heat upon the previously roughened surface. It has been found, however, that after transferring and removing the transfer paper, it was often not possible to avoid small or large defective places in the transferred design. This, of course, led to waste products and hence to an increase in the cost of pieces free from defect.

The present invention is based partly on the discovery that the adhesive power of preferably thin and conveniently 0.02 mm. to 0.05 mm. thick thermo-plastic foil of cellulose derivatives, particularly cellulose acetate, pressed by means of pressure and heat upon smoothly polished wood or other surfaces is very much greater than that of thicker foil (0.06 mm. upward) of the same composition. For example, such a foil in a thickness of 0.2 mm. after being pressed on to a smoothly polished wood or other surface, can be easily stripped off the latter again while a foil of the same composition—but of a thickness of 0.02 mm.—adheres to the said surface so firmly that it cannot be detached at all or only in small pieces.

It has now been found that if such foil is printed with colours and is pressed upon a smoothly polished support with the application of considerable heat and high pressure, and is stripped off the latter after pressing, the colours will have become entirely detached from the colour support and will have become anchored firmly in the surface of the support together with the softened and loosened parts of the foil, so firmly, in fact, that the design can be polished at once. The design appears on the support without defect and continuous.

I claim:

1. A method to decorate polished wood and other surfaces, which method comprises applying a design in printing colors to a cellulose derivative foil of at least 0.06 mm. thickness, pressing the design side of the foil onto the surface to be decorated under sufficient pressure and heat to weaken and loosen particles of said foil disposed adjacent said surface and stripping off the remaining part of said foil, to leave said design and said particles of foil firmly adhered to said surface.

2. A transfer sheet to decorate polished wood or other surfaces, comprising a cellulose derivative foil of at least 0.06 mm. thickness and a design of ordinary printing colors applied to said foil.

3. A transfer sheet, as claimed in claim 2, in which said foil consists of cellulose acetate.

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