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METHOD OF TRANSFERRING WATER SOLUBLE DYESTUFFS TO FABRICS AND POROUS SURFACES

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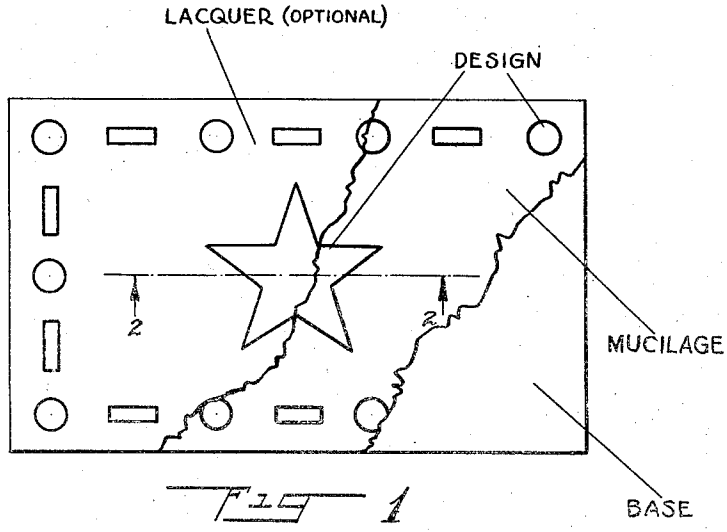


Fig 1

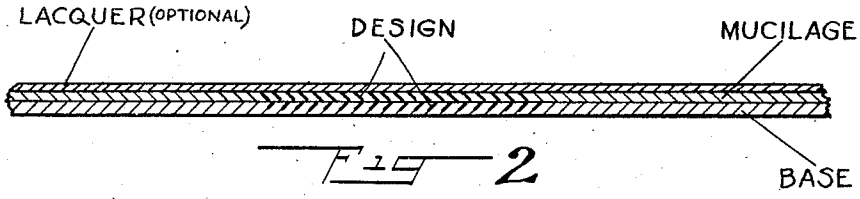


Fig 2

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UNITED STATES PATENT OFFICE

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METHOD OF TRANSFERRING WATER SOLUBLE DYESTUFFS TO FABRICS AND POROUS SURFACES

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The present invention relates to a method of transferring dyestuffs and more particularly to a method of transferring water soluble dyes to porous or absorbent materials such as fabrics, biscuit ware, unglazed earthen ware, walls and the like.

Objects and advantages of the invention will be set forth in part hereinafter and in part will be obvious herefrom, or may be learned by practice with the invention, the same being realized and attained by means of the instrumentalities and combinations pointed out in the appended claims.

The invention consists in the novel steps, method, combinations and other improvements herein shown and described.

The present invention has for its object the provision of a novel method of ornamenting porous or absorbent surfaces by transferring designs in soluble dye thereto, and more particularly to a method of transfer ornamentation which produces strong transfers, even on surfaces having a relatively low porosity, while avoiding the bleeding of the dyestuff on the absorbent or porous surface. A further object of the present invention is the provision of a method of transfer decoration which can be carried out rapidly and economically. The invention also provides a method for the transfer decoration of silks, satins and other textile material with soluble dyes in such a manner that no water marks or spotted edges are formed on the material as a result of carrying out of the method. The invention also provides a method of ornamentation which permits the elimination of the dusting step in the manufacture of the transfers.

In accordance with the present preferred and illustrative manner of carrying out the present invention a transfer, comprising a sheet of paper or the like bearing a design thereon in soluble dye is pressed against the surface to be decorated which is moist and has been coated with a non-bleeding agent, such as a mucilaginous gum, thereby causing the dye to be transferred from the transfer to the surface to be decorated. The mucilaginous gum not only prevents bleeding of the dye, thereby preventing blurring of the design, but also serves to maintain the paper base of the transfer in place during the transferring operation, so that after the transfer has been applied to the moist, mucilaginous-coated surface to be decorated, it is adhesively maintained in place and the transfer operation is effected without further attention.

While the method of the present invention is preferably carried out with transfers in which a water-soluble dyestuff is imprinted on a temporary support such as paper, it is also applicable to other types of transfers such as that shown in my prior Patent, No. 1,651,470.

The present invention finds a large field of usefulness in connection with the decoration of tile walls which may afterwards be provided with a protective coating of clear lacquer or other transparent material.

Of the drawings:

Fig. 1 is a diagrammatic plan view of a design transferred according to the invention, certain parts being broken away to show the elements of the ornamentation; and

Fig. 2 is an enlarged vertical cross-section taken on line 2—2 of Fig. 1.

Referring now in detail to the present preferred and illustrated manner of carrying out the method of the invention, the transfers employed are preferably formed by printing the desired ornamental design in one or more colors on a temporary support, such as paper, using an ink containing a water-soluble dye. The surface to be decorated, which is preferably porous or absorbent, is preliminarily coated with a layer of a gel formed by dissolving powdered gum tragacanth or gum karaya, with or without a preservative such as benzoate of soda, which has been thoroughly mixed with and swelled by water to form a mucilaginous liquid. While the mucilaginous coating on the surface to be marked or ornamented is moist, the transfer sheet, printed with the design in water soluble dye, is placed on the surface and pressed into firm and even contact therewith, where it is allowed to remain undisturbed for a short period of time and while the dye is transferred from the paper

transfer base to the porous or absorbent surface, while bleeding of the soluble dye is prevented by the film of mucilaginous material which separates the transfer from the surface to be decorated.

Referring now to the embodiment of the invention illustrated by way of example in the accompanying drawings, the various instrumentalities employed in carrying out the novel method of the invention are shown in their assembled relation, and the components of the completed ornamentation are indicated by printed legends. It will be understood that the base shown in the drawings may be any porous surface, such as wallboard, tile, silk, satin or other textile material. The non-bleeding agent is indicated as "mucilage" in the drawings, but it will be understood that the broad principles of the invention are equally adapted to the use of any substance in this relation which will provide a suitable non-bleeding agent for the transfer of the soluble dye-stuffs to the porous base. A layer of lacquer or other transparent film is indicated as covering the transfered design, but it will be understood that the invention is in no sense limited to the use of such a protective film.

The invention in its broader aspects is not limited to the specific steps and ingredients shown and described but departures may be made therefrom within the scope of the accompanying claims without departing from the principles of the invention and without sacrificing its chief advantages.

Claims:

1. A method of transferring soluble dyes from a carrier to an absorbent surface comprising coating the surface with a solvent thickened with a mucilaginous gum and immediately contacting the dye-bearing face of the carrier with the coated surface to cause the dye to be transferred to and absorbed by the surface.

2. The method of transferring designs or markings to an absorbent surface which comprises preliminarily applying a layer of moistened mucilaginous material to the absorbent surface, and thereafter contacting a surface bearing a design in water-soluble dye with the surface to be marked whereby the dye is transferred to the surface to be marked without bleeding or distortion.

3. The method of transferring designs or markings to an absorbent surface which comprises forming a mucilaginous colloidal jel by mixing water and a powdered gum, applying said jel to the absorbent surface, and thereafter contacting the design-bearing surface of a transfer sheet having a design in soluble dye with the coated absorbent surface to be marked.

4. The method of transferring designs or markings to an absorbent surface which comprises preliminarily coating the surface with a mucilaginous substance, thereafter placing the design-bearing surface of a transfer sheet in contact with the coated surface to be marked, whereby the design is transferred to the absorbent coated surface, drying the decorated surface and applying thereto a protective transparent coating of lacquer or the like.

5. The method of transferring designs which comprises coating a porous surface with a non-bleeding agent, and placing the design-bearing surface of a transfer sheet having a soluble-dye design thereon into contact with the coated surface in the presence of a solvent for said dye.

6. The method of transferring designs which comprises coating a porous surface with a non-bleeding agent, and placing the design-bearing surface of a transfer sheet having a water-soluble-dye design thereon into contact with the coated surface in the presence of water.

In testimony whereof I affix my signature.

HELENA S. SADTLER.