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METHOD OF TRANSFERRING DYESTUFFS TO FABRICS.

No Drawing. Application filed February 3, 1927. Serial No. 165,755. REISSUED

This is a continuation in part of my application Serial No. 23,717, filed April 16, 1925, for method of transferring dyestuffs to fabrics.

My invention relates to a method of transferring dye stuffs to fabrics—soft papers—clay or biscuit ware, etc. in fact any material that will absorb water or solvent in which the dye stuff can be absorbed, wherein only portions of the fabric are to be dyed or decorated thus producing letterings, designs or pictures. The dyed places can be deeply dyed or only tinted, can be fugitive, fast or indelibly dyed or stained, as desired. For some purposes such as embroidery designs a fugitive marking is desirable. For imitation of block printing, permanent markings and decorative designs fastness of the dye or coloring is desired.

My method relates to the use of water soluble dyes by which they may be printed on paper in relief effects and then transferred by contact with the wetted cloth or substance. In a particular way which I will describe so that all the stages of preparing the ink, printing with the same and transferring to a wetted surface may be carried on in a commercial way or by people with little or no special skill or training.

In recent years the direct printing of fabrics has been developed owing to improvements in dyes—so that designs may be printed and then only steamed to render the colors fast. My invention includes a method of accomplishing the same results but by a different procedure. I am able to print the desired colors first on a nonabsorbent paper and by dusting the printed surface with a fine powder as gum tragacanth, etc. which enables the use of a non-drying ink on the press and the dust prevents offsetting and produces a dry surface pattern until used in contact with the wetted surface. I find that the designs can then be easily transferred by simply wetting the fabric or material to be marked and then placing the paper transfer with printed side against the wetter surface and allow the paper to remain in close contact with the wetted fabric or material for a minute or so and the entire coloring will penetrate into the wetted substance. A clear exact reproduction of markings or designs that were on the paper are now in the fabric, etc. The marking is now allowed to dry. In marking fabrics when it is desired that the color or colors selected for this purpose be fast, it is then only necessary to place a wet cloth over the transferred marking and apply a hot iron to steam the same in other words, the selected direct colors used only require steaming to render them fast. Colors so treated will also resist dry cleaning. The carbo-hydrate powder such as tragacanth, etc. aid in the manufacturing by eliminating the offsetting and allowing sheets to be stacked and it also prevents creeping when the design is transferred to the wetted surface, thus permitting a complete transfer of the design from the paper without the application of heat or steaming.

Specifically I use what is known in the trade as paste for printing textiles or an ink with a glycerine base in which the water soluble dyes are incorporated and I generally employ a substantive dye or one that is capable of dyeing any one or all of the most used material, such as cotton, wool or silk. Mordants such as tannin or metallic salts may be incorporated into this ink. I use a nonabsorbent paper so called grease proof parchment paper with the above mentioned ink or textile paste using a generous supply. This ink surface is then dusted with a powder made from a mucilaginous gum, such as gum tragacanth, etc. The printed surface may have applied to it more than one ink or paste of different shades or colors, but of the kind I specify in this way, multi- or varied colored effects may be produced. I find that mucilaginous gum tends to fix the color to the spot where it is applied in character or design and it does not run when applied to the wetted material.

When the printing is performed on plate presses I use glycerine to keep the ink from drying on the press and may also use some colloidal jell jointly with it, but if cylinder presses are used, some form of thickener such as a carbohydrate that forms a colloidal jell with water which may be of gum or starch paste made of such starches as tapioca or wheat that become strongly colloidal with hot water, and the printing is done while in a heated state, is used as a medium, and the glycerine is not necessary, but the impressions are dusted as they come off the rollers with the mucilaginous gum powder. As these transfers may be used for either cotton, wool, rayon or silk, I generally use a so-

called union dye which will dye any of these fabrics and I may also use some form of mordant such as tannin and metallic salt, potassium antimony tartate, etc.

When printed on cylinder and flat bed presses sufficient colloidal jell can be added to the printing medium or paste so that dusting is not required, but I prefer the dusting method because it gives a dry surface to the printing immediately and it causes the dye to more readily penetrate the wetted surface in being transferred to the different materials or substances.

I claim—

1. A transfer sheet comprising a substantially nonabsorbent base having printed thereon, a design in water soluble ink, and a coating of mucilaginous powder adhering to the design and partially absorbed by it.

2. A transfer sheet comprising a substantially nonabsorbent base, bearing an ink design thereon, said design being covered with a mucilaginous powder which has partially absorbed the ink.

3. A transfer sheet comprising a sheet of substantially nonabsorbent paper having thereon a design or marking printed with a dyestuff in solution, and dusted with a powdered mucilaginous gum.

4. A transfer sheet comprising a paper base and a design thereon composed of a water soluble substantive dye and a suitable mordant, dusted with a mucilaginous powder.

5. A transfer sheet comprising a substantially nonabsorbent base having a design thereon formed of dyestuff in glycerine solution, said design being covered with a mucilaginous powder, partially absorbed by the ink in the design and in sufficient quantity to render the design adhesive when wet.

6. The process of making a transfer sheet which comprises printing a design with water soluble ink on a substantially nonabsorbent base, and dusting the moist design with a mucilaginous powder to dry the impression and render the design adhesive when again moistened.

In testimony whereof, I have hereunto signed my name, at Washington, in the District of Columbia, this third day of February, 1927.

HELENA S. SADTLER.