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RESERVE DYEING ON VEGETABLE FIBERS.

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This application is divisional of application Ser. No. 26,289.

The hitherto known reserve processes consist of mechanical or chemical operations. To the first type belongs the binding and the covering of the vegetable fibers (yarns and fabrics) by substances insoluble in water so that the dyestuffs employed can only soak in and be fixed on the unbound or uncovered parts of the fabric. To the second class belongs the application of certain agents, preferably of salts, which react chemically during the dyeing or during the development of the dyes. All these processes depend, however, on certain conditions. If the reserve agents employed are removed during the dyeing process or during the development of the dyes, or if they do not resist these operations until the end of the dyeing, then the desired reserve effect does not occur and the fabric is dyed uniformly throughout as if the reserving agents had not been used at all.

It is known from German specification No. 346,883 and others, that it is possible to render vegetable fibers (yarns, loose material, fabrics) completely immune against substantive dyestuffs by treating them after alkalinization with solutions of aromatic carboxylic acid chlorides or aromatic sulpho acid chlorides. Both the alkalinization and the action of the aromatic acid or sulpho acid chlorides are so effected that the whole of the vegetable fibers is brought into the solutions of the respective agents.

It has now been shown in a surprising manner that this esterification can also be used for the topical alteration of the vegetable fibers, in view of the production of reserve effects, for example in a suitable printing process. It was not at al lto be foreseen from the more active treatment in solution that the short superficial and sparing local treatment, as it takes place for example in the printing process, would suffice to produce the desired esterification. This process affords permanently reserving patterns with unexpected dyeing properties, which remain fast even after hot washing operations, after hot neutral, acid or alkaline dye baths.

The production of such reserve effects is now utilized in the process for reserve dyeing on vegetable fibers forming the subject of the present invention. This process consists in first treating topically the vegetable fibers by a local printing with a suitable alkalizing agent, such for example as a concentrated alkaline solution, with or without thickening agent, with or without the addition of alcohol, with or without an alcoholic solution of an alkali alcoholate, then in applying thereon in dry or moist condition, an esterifying aromatic acid chloride such as an aromatic carboxylic acid chloride, or an aromatic sulpho acid chloride, in pure or dissolved condition, and finally after the resulting esterification in thoroughly washing the vegetable fibers being thus locally altered at the places of the aforesaid print, to constitute what is commonly termed as reserve effects. Thereupon the fibers are dyed with a substantive dyestuff, without the locally altered esterified places taking up the dye, so that they appear white on a colored ground. However, it has been found that salts of diazotable bases can be fixed by the esterified places of the locally altered vegetable fibers, whereupon they can be developed by suitable developing means.

The fibers may be in form of loose material, yarns or fabrics. As dyestuffs, there may be used the usual coloring matters which are suitable for carrying out the improved process.

What we claim is:

1. A process for reserve dyeing on vegetable fibers, which consists in treating topically the vegetable fibers by a local printing with an alkalizing agent, thereupon applying an esterifying aromatic acid chloride to produce a topical alteration of the locally printed fiber, thus constituting reserve effects, then washing after the esterification, and thereupon treating the thus topically altered fibers first with a salt of a diazotable base and then after diazotizing with developing means.

2. A process for reserve dyeing on vegetable fibers, which consists in treating topically the vegetable fibers by a local printing with an alkalizing agent, thereupon applying an esterifying aromatic sulpho acid chloride to produce a topical alteration of the locally printed fiber, thus constituting reserve effects, then washing after the esterification, and thereupon treating the thus topically altered fibers first with a salt of a

diazotable base and then after diazotizing with developing means.

3. A process for reserve dyeing on vegetable fibers which comprises treating predetermined areas of said fibers with an alkalizing agent, esterifying said treated areas with an aromatic acid chloride whereby reserve effects are produced, washing said fibers and treating said areas first with a salt of a diazotable base and then after diazotizing with developing means.

4. A process for reserve dyeing on vegetable fibers which comprises treating predetermined areas of said fibers with an alkalizing agent, esterifying said treated areas with an aromatic sulpho acid chloride whereby reserve effects are produced, washing said fibers and treating said areas first with a salt of a diazotable base and then after diazotizing with developing means.

In witness whereof we have hereunto signed our names this 10th day of May, 1926.

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