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E. OWREN ET AL

2,590,643

METHOD OF TEXTILE PRINTING

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Fig. 1.

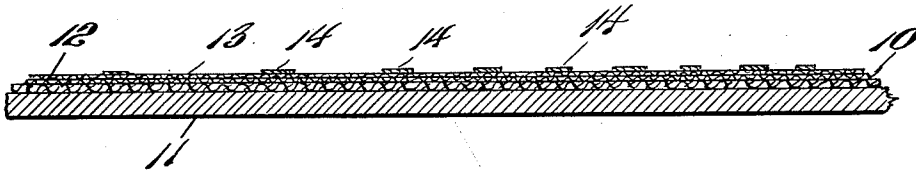
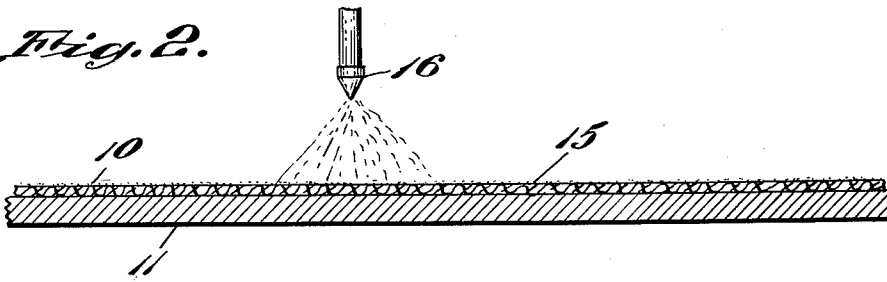


Fig. 2.



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METHOD OF TEXTILE PRINTING

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5 Claims. (Cl. 101—129)

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This invention relates to improvements in textile printing, particularly that process of printing known as silk screen cloth printing.

In textile printing, particularly in silk screen cloth printing, some of the dye or color is driven completely through the interstice between the threads of the cloth so that the design or pattern will appear on both sides of the cloth being printed. The cloth is usually placed upon an absorbent cloth backing known as a back-greige which blots and absorbs the excess color penetrating the cloth. The back-greige, as heretofore employed, unevenly absorbs the said excess color, which results in a series printing fault known as "stick marks" which is particularly objectionable in blotch patterns. Further, it was necessary to wash the back-greige between changes of color combination and/or patterns, thereby reducing the period of usefulness of the back-greige and, consequently, the more frequent replacement thereof.

An object of the invention is to improve generally on textile printing of this character so as to eliminate the objections above stated.

A more specific object of the invention is to provide for treating the surface of the back-greige to make the same more uniform in its absorption of the said excess color.

Another object of this invention is to provide for treating the surface of the back-greige between changes of color combination and/or patterns in a manner to completely seal the previous dyes deposited on the surface of the back-greige so as to permit repeated use thereof without washing.

In the accompanying drawings:

Figure 1 is a diagrammatic sectional view of the elements usually employed in silk screen cloth printing and

Figure 2 is also a diagrammatic view illustrating the steps of treating the back-greige.

In silk screen cloth printing the back-greige designated 10 is pinned or otherwise fastened to a print table 11. The cloth 12 to be printed is placed in contact with the back-greige 10 and a silk screen 13 is placed upon the cloth 12 so as to be in contact therewith. The silk screen 13 carries the pattern or design which is to appear upon the cloth 12 and this design is formed on the screen 13 by blocking out the proper areas thereon as at 14 so as to make these areas impervious to the dye or color. The dye is applied to the screen in a manner to drive or pass the same through the screen onto the cloth and through the interstice between the threads of the

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cloth being printed. The excess of the dye penetrating the cloth is blotted and absorbed by the back-greige.

In order to provide for an even absorption of the said excess dyes or color, we treat the contacting surface 15 of the back-greige with a repellent appropriate to the particular type dye employed; that is, if the dye is dispersed in an oil the solution applied to the back-greige will be such as to be repellent to the said dye mixture. The usual dye employed is dispersed in a water solution and, accordingly, we employ a suitable water repellent. A water repellent which has been found satisfactory consists of a solution of aluminum stearate and wax in a solvent of the Stoddard type.

Preferably, the repellent is applied to the surface of the back-greige in a fine mist in any suitable manner such, for example, as by means of a nozzle 16, shown in Figure 2, which is connected to a proper source of supply. The said repellent is applied in a sufficient quantity so as to completely coat the filaments of the nap on the surface of the back-greige to destroy the capillary action thereof, but not to a degree to fill up the interstices between the threads of the back-greige. A back-greige so treated as a uniform porous surface which evenly absorbs the said surplus of the dye penetrating the cloth being printed and eliminates the said "stick marks."

We have also discovered that we may treat the said surface of the back-greige in a like manner at each change of color combination and/or pattern so as to coat the surface of the back-greige and seal the previous dye absorbed thereby, whereby the back-greige may be kept in longer use without washing. Thus, we eliminate the usual washing of the back-greige between each of said changes of color combinations and/or pattern, thereby prolonging the usefulness of the said back-greige.

We claim:

1. The method of textile printing which comprises providing a flat surface, positioning on said surface a back-greige comprising a woven, porous, absorbent and adsorbent fabric, treating the work-contacting surface of the back-greige with a dye repellent solution in a quantity sufficient to deposit on the fibers of said fabric and leave the interstices of the said fabric open for receiving an excess of a penetrating dye, positioning the cloth to be printed over the back-greige, placing a stencil pattern on said cloth to block out certain areas thereof and expose other areas thereof, applying a dye on the exposed areas in

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amounts sufficient to penetrate through the said cloth to the other side to provide the pattern to be displayed with excess dye received by the back-greige and then removing the cloth.

2. The method of textile printing as set forth in claim 1 wherein the dye repellent is applied in a mist form on the surface of the woven fabric.

3. The method of textile printing as set forth in claim 1 wherein the said dye is dispersed in a water solution and the said dye repellent solution is a water-repellent.

4. The method of claim 1 wherein after the cloth is removed a dye repellent treatment is given the back-greige without removing the same from the flat surface and then a fresh piece of cloth is positioned over the back-greige and the same is printed.

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5. A method of textile printing as set forth in claim 4 wherein a dye repellent is applied to the work-engaging surface of the said woven fabric at each change of color combination or pattern.

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The following references are of record in the file of this patent:

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