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METHOD OF APPLYING DESIGNS TO FABRICS

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Fig. 1.

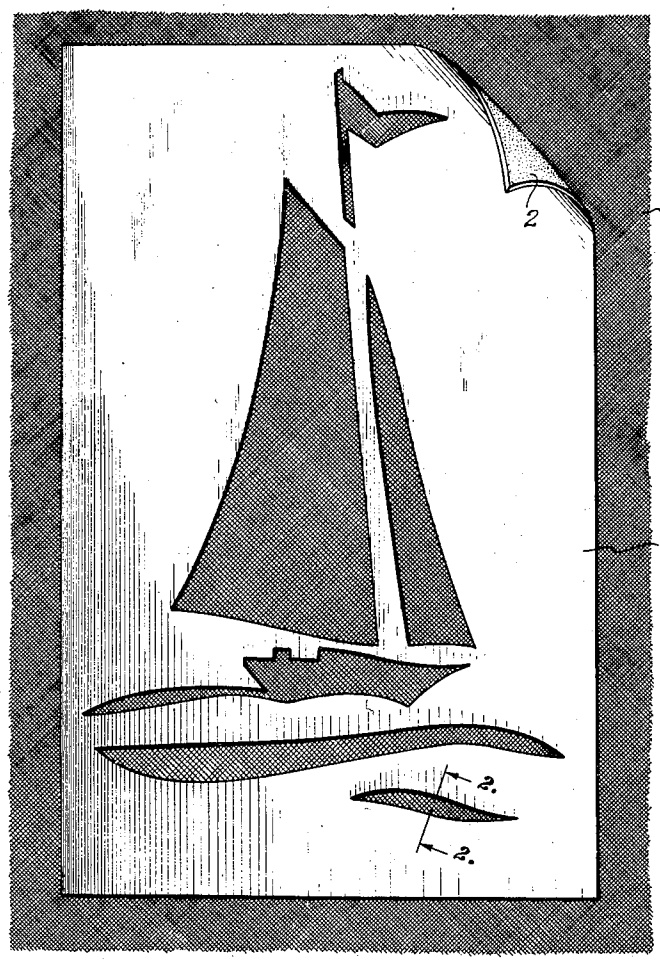


Fig. 2.

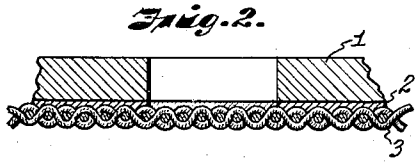


Fig. 3.



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METHOD OF APPLYING DESIGNS TO FABRICS

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7 Claims. (Cl. 101—129)

Our invention relates to a method of applying designs to fabrics and more particularly to a novel and improved method of stenciling upon silks, linens, and other fabric materials.

In applying designs with stencils the methods known to the prior art are limited to the application of designs to non-porous or absorbent materials. If it is attempted to stencil fabrics, it will be found that the paints will run and be absorbed by the fabric so that a clear cut design is not obtained. One method of the prior art, known as the "silk screen" process enables designs to be applied to fabrics by means of a specially constructed stencil in which the paints will not run. The designs made by the silk screen process are flat. In our process, the designs may be applied so that the letters have a definite and appreciable thickness, giving the appearance of an embossed design. In the silk screen process, the paint must be applied by hand in any of the usual manners. If it is attempted to spray the paint, the force of the air spray will cause a separation of the silk screen from the fabric upon which the design is being placed, causing colors to run and blurring the design. In the silk screen method, a special screen material is necessary and considerable cost and labor are required to make the screen prior to applying the design.

One object of our invention is to provide an economical and rapid method of applying designs to fabrics such as silks and the like, including loosely woven fabrics.

Another object of our invention is to provide a method of applying embossed designs to fabrics.

A further object of our invention is to provide a method of applying designs to fabrics in which the color may be sprayed on.

Another object of our invention is to provide a method of stenciling designs on fabrics which will produce a clear cut, sharp design.

Other and further objects of our invention will appear from the following description.

In the accompanying drawing, Figure 1 is a view of a piece of fabric with a stencil sheet thereon having one corner thereof lifted.

Figure 2 is an enlarged sectional view, taken on a line 2—2 of Figure 1, showing the stencil in place before a high viscosity paint is applied.

Figure 3 is a sectional view similar to Figure 2, after the high viscosity paint has been applied and the stencil removed.

In general, our invention contemplates forming a stencil and applying to one side thereof an adhesive having preferential adhesion for the stencil material. The stencil is stuck to the fabric upon which the design is to be placed by pressure, rolling, or in any other suitable manner. The fabric will then closely adhere to the stencil. The adhesive substance is such that it is repellant to the paint to be applied. The paint is of sufficiently high viscosity so that it will act as a filler, thus preventing it from being adsorbed and penetrating the fabric. The paint may be sprayed on, inasmuch as the adhesive substance will prevent the stencil sheets from being lifted and allowing paint to pass thereunder. Any number of coats may be applied in succession. When the design dries, it has the appearance of an embossed design.

More particularly, we coat one side of stencil paper 1, which may be of any suitable sort, or any other suitable stencil material which may be readily cut into stencils, with an adhesive 2. This adhesive may be beeswax, candelilla wax, bayberry wax, Montan wax, and the like. These waxes are such that at ordinary temperatures, they are tacky. Applied to the stencil paper, they adhere closely thereto. One method of applying the wax is to heat it until it is liquid and then apply it with a brush. Any desired design is then drawn upon the stencil material and the stencil is cut in a manner well known to the art. The fabric 3, which may be loosely woven silk, cotton, or the like, upon which ordinary stencils cannot be used without permitting the color to run underneath the stencil, is then placed upon a hard smooth surface. The stencil, with the adhesive substance applied thereto, is placed on the fabric and pressed or rolled, or otherwise firmly stuck to the fabric. The adhesion is such that, when the stencil is removed, none of the wax will stick to the fabric and no trace is left of the wax upon the fabric. This is what we mean by an adhesive having preferential adhesion for the stencil material. It will be obvious that, if the stencil were removed and the wax were left upon the fabric that good results would not be obtained, as the fabric would be disfigured. The waxes above mentioned, furthermore, are paint repellant.

The fabric is then ready for the application of the paint 4. Ordinary paints cannot be used to give the effect we desire, that is an embossed design. We employ for this purpose a paint of high viscosity. This paint is prepared with a base consisting of a drying or semi-drying oil thickened with a metallic soap. For example, we may use such drying oils as perilla oil, linseed oil, tung oil, hemp oil, and the like, or such semi-

drying oils as soya bean oil, corn oil, or pumpkin seed oil and the like. For the thickening agent, we may employ aluminum stearate, lead oleate, and other well known metallic soaps. The base thus composed is used as a vehicle for any desired color. The paint may be applied to the stencil by hand brush, roller, squeegee, or in any other suitable manner, or may be sprayed upon the stencil. We prefer the spray inasmuch as this forms a rapid method of applying the color and the results are more uniform. This ability to apply the paint by spraying, with our method constitutes a major advantage over the stenciling methods of the prior art in applying stencils to fabrics. After one coat has been applied, a drying period of from five to ten minutes is permitted and a second coat is applied. Successive coats of high viscosity paint soon build up a thickness of $\frac{1}{32}$ of an inch or more. After the high viscosity paint has been applied and permitted to dry for a period, any other suitable paint may be applied inasmuch as the high viscosity base acts as a filler so that the second application of paint need not be a high viscosity paint. It may be a lacquer or a varnish if it be desired to impart a glossy finish.

If the design is to be placed upon a colored fabric and it is not desired that the back of the fabric show the design in reverse, a color similar to the color of the fabric may be applied to the base and the first application be made of the paint, similarly colored, to the fabric. The successive layers of paint may be of any desired color. We may dust the design with a metallic dust or comminuted tinsel, or the like, before the final coat is dry, if we wish the design to have a glittering finish.

After the final coat of paint has been applied, the stencil is removed and the design is allowed to dry. The result is a design of embossed or raised appearance which is firmly secured to the fabric. After a period of drying, the design will be weather proof and may be washed and ironed, provided the color in the fabric is fast.

It will be observed that we have accomplished the objects of our invention. We have provided a novel, facile, rapid, and efficient method of applying designs to fabrics. Due to the fact that the stencil will adhere to the fabric, it is not necessary to form a stencil in the usual manner, that is, with supports and braces, inasmuch as the stenciled parts will be held in position by the fabric itself. Due to the fact that the stencil will adhere to the fabric, we may use an air spray for applying paint, without the danger of lifting the stencil and permitting the paint to pass thereunder. The adhesive material is repellant to the paint and is such that it has preferential adhesion for the stencil material. When the stencil is lifted, none of the adhesive will stick to the fabric.

The design is extremely clear cut and the stencil material need not be of any special character, enabling the design to be applied more cheaply and, at the same time, giving a distinctive embossed appearance.

It will be understood that certain features and sub-combinations are of utility and may be employed without reference to other features and sub-combinations. This is contemplated by and is within the scope of our claims. It is further obvious that various changes may be made in details within the scope of our claims without departing from the spirit of our invention. It is, therefore, to be understood that our invention is not to be limited to the specific details shown and described. The adhesive material, for example, need not be wax, but may be any suitable tacky material enabling our process to be carried out.

Having thus described our invention, what we claim is:

1. A method of applying designs on fabric including the steps of sticking a stencil to a fabric and applying a high viscosity paint, whereby lateral migration of the paint is precluded.

2. A method of applying embossed designs on fabric including the steps of sticking a stencil to the fabric with an adhesive having preferentional adhesion for the stencil material and applying a high viscosity paint in successive steps with intermediate steps of drying.

3. A method of stenciling designs on fabric including the steps of securing a stencil to a fabric by an adhesive and applying a paint having a high viscosity base, a pigment and insufficient oil content to stain fabrics at the edges of the designs.

4. A method of stenciling designs on fabric including the steps of securing a stencil to fabric with a wax having preferential adhesion for the stencil and spraying a high viscosity paint.

5. A method of stenciling designs on fabric including the steps of coating a stencil with an adhesive having preferential adhesion for the stencil, pressing the coated stencil to the fabric and applying a high viscosity paint.

6. A method as in claim 5 wherein the fabric is colored and a paint of the same color as the fabric is employed in the first paint applying step.

7. A method as in claim 5 wherein the paint is applied by spraying.

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