March 24, 1931. H. S. SADTLER 1,797,998

ORNAMENTATION

Filed March 28, 1929

Fig 1

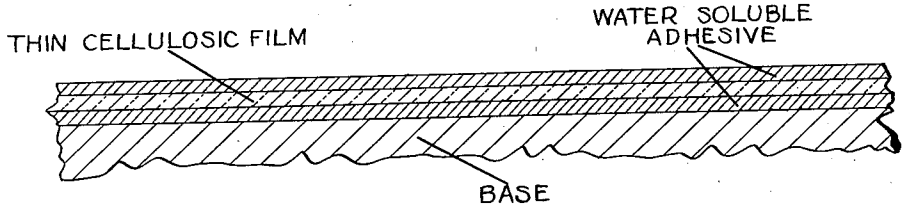
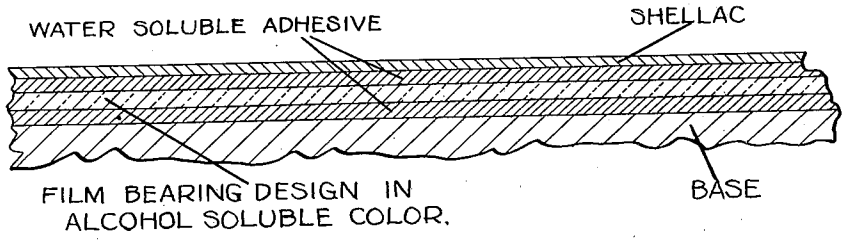


Fig 2



INVENTOR

Helena J. Sadtler

BY

John D. Morgan

ATTORNEY

Patented Mar. 24, 1931

1,797,998

UNITED STATES PATENT OFFICE

HELENA S. SADTLER, OF ERDENHEIM, PENNSYLVANIA

ORNAMENTATION

Application filed March 28, 1929. Serial No. 350,834.

The invention relates to the ornamentation of surfaces and more particularly to a novel and useful process for applying a decorative sheet or film to a surface, and to a novel and useful decorative article or product.

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, process, article and improvements herein set forth.

Of the drawings,

Figure 1 is a diagrammatic cross section through a decorated object in accordance with the present preferred manner of carrying out the invention.

Figure 2 is a diagrammatic cross section, similar to that shown in Figure 1, with the final protective coating of shellac applied to the object.

The invention is directed to a process for applying or securing a decorative sheet or film, bearing an ornamental design in one or more colors, to a suitable base or surface to be decorated and protecting the outer or exposed surface of the decorated sheet with an intermediate guarding or resisting substance so that an outer protective coating or film may be applied without causing bleeding or smearing of the colors.

In the securing of decorative sheets to surfaces, it is desirable and customary to coat over the sheet and sometimes the surface with a film of transparent shellac, lacquer, varnish or the like which hardens and forms a transparent protective coat. However, the application of such a film is frequently difficult or impossible without causing a bleeding or smearing of the colors used on the decorative sheet, because such dyes or colors are usually soluble in the alcohol or other organic solvents contained in the shellac or other coating substance. By my invention, I apply to the exposed, colored surface of the sheet an intermediate film or coating of a substance which will not dissolve or cause bleeding of the colors and which will act as a barrier and be impervious to the alcohol or other solvent in the outermost coating.

The invention is further directed to a process for applying and securing to various surfaces decorative sheets which comprise ornamented sheets or films of substances, preferably such as regenerated cellulose, onion skin paper, or other very thin cellulosic foils or sheets. A further object of the invention is to effect an application of very thin sheets, particularly cellulosic films, so as to secure and maintain a perfectly smooth contact without wrinkling or any unevenness in the applied sheets. In this connection, the invention provides a novel and useful method of applying thin films which have been previously wrinkled or mussed and completely eliminates the wrinkled appearance, without injury to the sheets or films.

The ordinary method of applying sheets to surfaces comprises applying an adhesive to the undecorated side of the sheet and pressing the sheet into contact with the base surface. In applying thin cellulosic films or sheets to surfaces in this manner it is practically impossible to leave the sheet smooth and without wrinkles. This is principally due to the fact that the moist adhesive causes the film or sheet to swell on the moistened side, whereby a warping and stretching action takes place between the wet and dry surfaces, causing the film or sheet to curl and wrinkle. When it is attempted to apply this wrinkled sheet to the base, smoothing pressure applied to the dry outer surface frequently causes the sheet to tear or become permanently creased, and it is extremely difficult to obtain the smooth contact desired. This wrinkled effect is particularly prevalent when the sheet or film is applied to smooth base surfaces, where there are no depressions nor unevenesses in which the wrinkles might adjust themselves. Substantially the same wrinkling takes place if the undecorated face of the sheet is applied dry to a surface which has been coated with adhesive, the sheet almost invariably wrinkling during the drying of the adhesive.

To carry out the foregoing and other ob-

jects of the invention, I apply a coating of well-made, transparent mucilage, preferably the solution of a water-soluble gum such as gum arabic, either to the surface to be decorated or to the back surface of a decorated sheet of paper or the like, which in some instances may consist of regenerated cellulose, onion skin paper or other very thin cellulosic sheet material. I promptly place the sheet of material in its desired permanent position and apply a thin coating of the mucilaginous solution to the outer surface of the decorated sheet. This latter outside coating may be made with a moderately soft brush, with the finger tips, or with any other suitable yielding pressure, the sheet being gently pressed onto the surface and rubbed with circular motion from the center outward over the surface until the whole sheet is perfectly smooth. If desired, the outer coating of mucilage may be applied to the decorative sheet simultaneously with the rear coating.

When the outer coating of mucilage has dried, I then apply a final protective coating of transparent shellac, lacquer, varnish or the like over the decorated sheet and around the edges thereof. By virtue of the intermediate barrier of dried mucilage over the decorated sheet, the alcohol or other solvent in the outermost coating cannot reach the colors on the sheet, so that all running, smearing or bleeding of the colors is prevented. This is a particularly valuable feature, because it is ordinarily cheapest and most desirable to use coloring matter on the decorative sheet which is non-soluble in water but which is soluble in alcohol and/or other organic solvents found in shellacs, varnishes and lacquers.

In addition to providing an intermediate protective barrier for the colors, the outer coating of adhesive cooperates with the inner adhesive coating to absolutely eliminate the wrinkling, uneven application and possible tearing hereinbefore described. The double application of adhesive causes the sheet to swell equally on both sides and produces a perfectly and uniformly pliable sheet which can be rapidly and permanently smoothed out and which will remain smooth and in uniform contact with the base when the adhesive dries. This treatment, while generally applicable, is especially effective and desirable in connection with sheets formed of very thin cellulosic material.

The double coating of mucilage furthermore forms an unusually tight bond between the sheet and the base surface, especially around the edges, and secures a more permanent adhesion than would otherwise generally result.

Figure 1 of the drawing is a diagrammatic cross section through an object decorated in accordance with the present invention, and including a thin cellulosic film bearing the design and which has been coated on both sides with an adhesive and secured to the base or object to be decorated. Usually, and in accordance with the preferred manner of carrying out the invention, this decoration is completed by the application of a thin layer of shellac, dissolved in alcohol, to the film to form a protective coating overlying the decoration. As shown in Figure 2, the water soluble adhesive serves to swell both sides of the thin film uniformly, secures the film to the base and also forms a protective barrier between the alcohol soluble design on the film and the coating of shellac, thereby preventing the running of the design which would otherwise result from the application of the shellac.

The invention in its broader aspects is not limited to the specific steps and details 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.

What I claim is:—

1. An ornamented article comprising a base, a film secured thereon and covered by a layer of water-soluble adhesive and a protective layer overlying the base and film, said film bearing a design imprinted thereon in coloring matter injuriously affected by the solvent of the protective film.

2. A method of ornamenting articles by applying ornamented designs imprinted on a cellulosic sheet which includes coating both sides of the sheet with a layer of adhesive dissolved in a solvent which swells the sheet and applying the coated sheet to the article to be decorated, drying, and coating the secured sheet with a protective coating dissolved in a solvent which is injurious to the coloring matter with which the design is imprinted.

3. An ornamental article comprising a base, a film secured to the base having a design imprinted thereon in one or more colors, a transparent layer of adhesive covering the design-bearing surface of the film, and a protective coating having an ingredient injurious to the coloring matter of the design overlying the layer of adhesive forming a protective barrier between the coloring matter and the injurious ingredient.

4. A method of ornamenting articles comprising affixing a design-bearing sheet to a base by adhesive, coating the exposed design-bearing surface with a layer of adhesive, and coating the sheet with a protective layer of transparent material containing an ingredient injurious to the coloring matter of the design.

5. A method of ornamenting articles comprising coating both surfaces of a very thin cellulosic film bearing a colored design of water-insoluble colors on one surface there-

of with a layer of water-soluble adhesive, affixing the undecorated surface of the film to a base with a yielding and smoothing pressure, drying the adhesive, and then coating the film with a transparent shellac or the like which contains a solvent injurious to the water-insoluble colors.

6. A method of ornamenting articles by applying ornamental designs imprinted on thin cellulosic films which includes moistening one side of said film with water soluble adhesive, moistening the other side of the film with a similar adhesive while the first side is still moist so as to uniformly swell the two sides of the sheet and applying the coated film to the article to be decorated.

7. A method of ornamenting articles by applying ornamental designs imprinted on thin cellulosic sheets which includes the steps of applying said sheet to the surface of the article to be ornamented and moistening both sides of said sheet with an adhesive dissolved in a solvent which swells the sheet, the moistening of one side being carried out while the other is wet to uniformly swell both sides of the sheet.

In testimony whereof, I have signed my name to this specification.

HELENA S. SADTLER.