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METHOD OF MAKING DECORATIVE MATERIALS

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This invention relates to decorative materials and to the method of making the same. More particularly, it relates to decorative Cellophane and to the process of making the same.

The nature and objects of the invention will become apparent from the following description and appended claims.

For the sake of convenience and brevity, the invention will be described in connection with non-moistureproof, non-coated Cellophane which is transparent, lustrous and possesses smooth surfaces. It is to be understood that the Cellophane may be appropriately colored or otherwise decorated as by having any desired indicia embossed, printed, etc. thereon. Also, if desired, the Cellophane may be of the opaque variety, decorated or not as desired.

In accordance with the principles of this invention, non-moistureproof and non-coated transparent Cellophane, having smooth, regular and uniform surfaces, is subjected to a treatment whereby surface irregularities, such as wrinkles, are formed in the material to produce decorative effects. Prior to the formation of the wrinkles in the Cellophane, the latter is treated with a composition, hereinafter more fully described, whereby the Cellophane is rendered more amenable to the wrinkling operation. After the material has been wrinkled, it is dried in any suitable manner. Prior or subsequent to the drying operation, the wrinkled material is partially straightened out, care being taken not to remove the desired wrinkles in the body of the material.

The Cellophane is wrinkled in any suitable manner, either manually or by the use of appropriate apparatus. The term "wrinkling", or its equivalent, as used in this specification is intended to cover the production of surface irregularities in Cellophane as by wrinkling, crinkling, crushing, pebbling, etc.

The composition with which the Cellophane is treated prior to the subjection of the Cellophane to the wrinkling operation is such that, after drying the Cellophane treated therewith, the resulting product will substantially retain at least the transparency luster and other properties which characterize Cellophane. In some instances, the luster and sparkle of the product may be enhanced. Generally, the composition is an aqueous solution having dissolved therein a wetting or penetrating agent and a cellulose softener, the latter being also preferably hygroscopic.

As illustrative examples of cellulose softeners may be mentioned glycerin, sorbitol, ethylene glycol, diethylene glycol, etc. One or more of these substances may be used as desired.

In the preferred embodiment of the invention, the solution consists essentially of water, sulphonated castor oil (wetting agent) and glycerin (hygroscopic cellulose softener).

The proportions of the ingredients constituting the solution may vary within limits depending on the nature and thickness of the Cellophane and the results desired to be produced therein. Satisfactory results have been secured when the solution consists of the following ingredients in the proportions (by volume) set forth:

		Parts
Water	32	
Wetting agent	1	to 4
Softener	.02	to .50

The solution which has given the preferred results consists of the following ingredients in the proportions (by volume) set forth:

		Parts
Water	32	
Sulphonated castor oil	1	
Glycerin	.05	

In practice, the composition is applied to the Cellophane in an amount sufficient to thoroughly dampen or wet the Cellophane, whereby the Cellophane will not be injured or deleteriously affected during the wrinkling operation. The composition, upon application, quickly penetrates and impregnates the Cellophane.

The composition may be applied to the Cellophane in any known and convenient manner for applying solutions. Highly satisfactory results have been obtained when the composition is sprayed onto the Cellophane.

In order to more fully explain the invention, there is hereinafter set forth an illustrative procedure:

Cellophane, either in sheet form or as a continuous web, is sprayed with the selected composition. The composition, by virtue of the consti-

tients thereof, rapidly penetrates into the Cellophane and thoroughly dampens or wets the same, depending on the quantity of solution applied. The thus treated Cellophane, which is now highly flexible, is then subjected to a crushing operation, the crushing force being applied transversely of the material, whereby the Cellophane is crushed and irregular wrinkles are imparted to the entire surfaces of the Cellophane. In one form of the process, the crushed material is dried or permitted to dry and thereafter partially straightened out, care being taken not to remove the desired wrinkles imparted to the surfaces. In an alternative procedure, the wrinkled Cellophane is festooned and then dried. The wrinkled material is partially straightened out at some stage in the operation after crushing. Thus, the wrinkled material is partially straightened out prior to, subsequent to, or simultaneous with the festooning operation.

Though in the processes previously described the wrinkles are non-uniform, uniform wrinkles, in appropriate designs, may be obtained by use of appropriate apparatus.

The product resulting from the process hereinbefore described consists of wrinkled Cellophane in which the wrinkles are substantially permanent. By virtue of the wrinkles, the product is highly ornamental and can be used whenever decorative effects are desired. For example, it can be used as a wrapping tissue, as an exterior ply in laminated materials, and, when cut or slit into appropriate widths, as a tying ribbon, braid, etc. It is further to be noted that the product is in a preshrunk condition and that it will not be so susceptible to changes in humidity conditions of the environment in which it may be used.

Though the invention has been described specifically in connection with Cellophane, it is to be understood that the invention is not restricted thereto and is applicable to all material having properties similar to Cellophane.

Since it is obvious that various changes and modifications may be made in the above description without departing from the nature or spirit thereof, this invention is not restricted thereto except as set forth in the appended claims.

I claim:

1. A method of producing a decorative material which comprises at least dampening a film of Cellophane with a composition consisting essentially of water, a penetrating agent and a cellulose softener, and subjecting the thus treated Cellophane to an operation which imparts wrinkles in said Cellophane.

2. A method of producing a decorative material which comprises at least dampening a film of Cellophane with a composition consisting essentially of water, a penetrating agent and a cellulose softener, subjecting the thus treated Cellophane to an operation which imparts wrinkles therein, drying the material and at least partially straightening the treated material at some stage in the method subsequent to the wrinkling step.

3. A method of producing a decorative material which comprises at least dampening a film of Cellophane with a composition consisting essentially of water, a penetrating agent and a cellulose softener, subjecting the thus treated Cellophane to an operation which imparts wrinkles therein, festooning the resulting material, drying the same and at least partially straightening the treated material at some stage in the method subsequent to the wrinkling step.

4. A method of producing a decorative material which comprises spraying a film of Cellophane with a solution consisting essentially of water, sulphonated castor oil, and glycerin to at least thoroughly dampen the same, crushing the thus treated material, drying the material and at least partially straightening out the crushed material at some stage in the process after crushing.

5. A method of producing a decorative material which comprises spraying a film of Cellophane with a solution consisting essentially of water, sulphonated castor oil, and glycerin to at least thoroughly dampen the same, crushing the thus treated material, festooning the material, drying the same and at least partially straightening out the crushed material at some stage in the process after crushing.

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