Jan. 31, 1933. C. E. FOLEY 1,895,711

COATED SHEET MATERIAL

Filed July 17, 1931

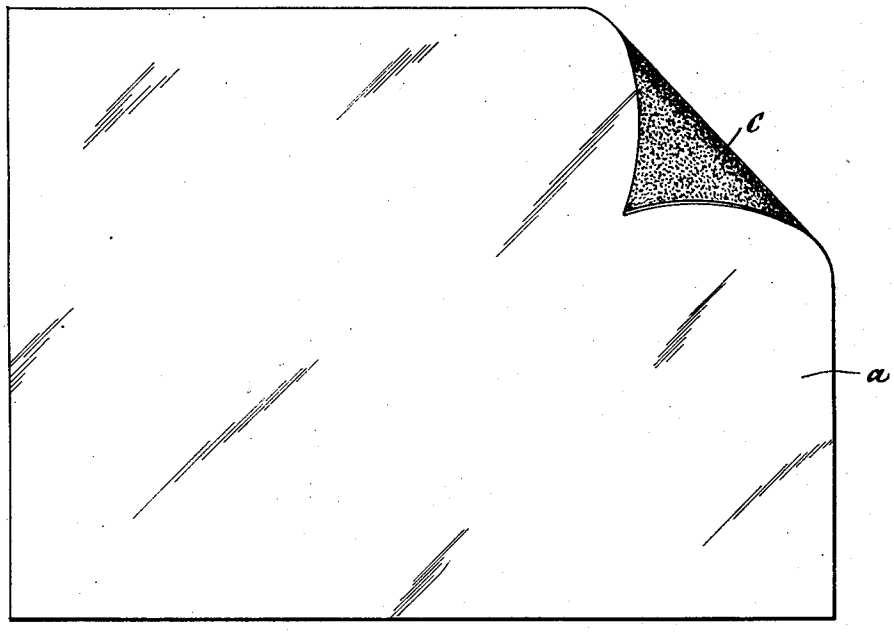


Fig. 1.

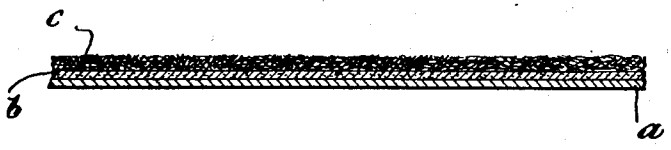


Fig. 2.

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UNITED STATES PATENT OFFICE

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COATED SHEET MATERIAL

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This invention relates to the production of decorative sheet material for packaging or wrapping articles therein, or for use as the outer visible coverings of boxes or other containers, or for manufacturing a wide variety of articles, especially where moisture-proof characteristics of the sheet material as well as ornamental appearances thereof are desired.

A particular object of the invention is to effect the economical production of very thin, light-weight, tough sheeting possessing many of the characteristics of suede leather. I attain this object by applying securely to cellulose derivative material in sheet form, a coating of finely comminuted material such as hereinafter described. The cellulose derivative sheet material is, preferably, moisture-proof cellophane, or acetate sheeting.

Of the accompanying drawing:—

Figure 1 is a plan view of a sheet of the product of my invention, with a corner portion rolled over to illustrate the appearance of the other surface of the sheet.

Figure 2 represents a section of said product, greatly enlarged to illustrate layers of the material.

In the preferred method of practicing the invention, the base material *a* is cellophane or other transparent sheeting of regenerated cellulose, or a transparent sheeting of cellulose acetate, in the form of a web of indeterminate length. Such web or sheeting is run through, or passed over, a coating machine of any well-known or preferred type, which machine applies thinly and evenly a sizing coat *b* (Fig. 2) of rather viscose liquid material, the formula for which may be:

	Parts
Glycerol pthallic anhydride resin, hard	22
Chlorinated di phenyl resin, soft	1.8
Chlorinated di phenyl resin, hard	1.8
Di chlor ethyl ether	7.3
Blown china wood oil	11.0
Carbitol	14.6
Violet pigment	.7
Red pigment	11.5
Calcium carbonate	14.7
Titanox	14.6
	100.0

I do not limit myself to the above formula, since any other suitable formula may be employed, to produce a sizing in the form of a tough resilient coating and which, by reason of its containing solvent material which partly penetrates the transparent sheeting, or by reason of its plasticity when dry, or by reason of other properties, will be sufficiently flexible and adhesive to secure the coating *c* which will now be described.

Very soon after the sizing coating *b* is applied, and while it is still wet and adhesive, finely comminuted material such as presently described, is caused to fall upon the sizing coating or layer *b*. Such deposit may be effected by sprinkling through a shaking screen, excess of the flocks being removed pneumatically, or by spraying, or by other suitable means which will apply the layer or coating *c* uniformly and completely.

The comminuted material may be cotton flocks, or flocks of wool, silk or rayon. Or it may be finely divided cork, feathers, metal, mica, pigment, or any finely comminuted material adapted to produce a decorative or useful effect.

The final step is to dry the coated sheet or web, preferably with hot air, care being exercised to keep the temperature below the point at which the transparent sheet material would become brittle, or its physical characteristics otherwise changed. After drying, the finished material, if in the form of a web, may be re-wound into rolls or cut into sheets for packaging or other uses to which the improved material is to be put.

The finished material is economically produced, both as to cost of the cellulose derivative and the flocky or comminuted coating, and in the steps of manufacture. It is a tough light-weight sheeting producible in an unlimited variety of colors or shades. Whatever the color or shade may be, both surfaces will be the same because the three layers *a b c* are very thin, and since the layer *a* is transparent, the color or tint of the other layers is visible through said layer *a*. Said finished material or sheeting is flexible, easy to work, strong, stretchable, and substantially water-proof. It possesses good wearing qualities and combines the decorative and

utilitarian qualities and advantages of a soft, velvety, suede-like face on one side, with a smooth, very glossy, bright colored other side.

I do not limit myself to making the product in three layers, as it is possible to make sheeting which fairly approaches that which I have above described, by mixing comminuted or flocky material with coloring material and adhesive material similar to or the equivalent of those hereinbefore described, and apply a single layer coating to the sheet of cellulose derivative, instead of two successively applied layers.

And it is to be understood that, for some purposes, both surfaces of the sheet of cellulose derivative may be coated as described, instead of only one surface.

Having now described my invention, I claim:—

As a new article of manufacture, sheet material consisting of a thin sheet of highly transparent cellulosic material one surface of which is uncoated and having its other surface completely coated with a colored adherent and resilient vehicle carrying finely comminuted flock material, the said article of manufacture as a whole being characterized by the transmission of color of the comminuted material through the transparent sheet on one side and a suede-like face on the other side.

In testimony whereof I have affixed my signature.

CHARLES E. FOLEY.