

UNITED STATES PATENT OFFICE.

JACOB HARTNAGEL, OF NEW YORK, N. Y., ASSIGNOR TO JOSEPH N. WIGGIN,
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MANUFACTURE OF WINDOW-SHADES AND SIMILAR ARTICLES.

SPECIFICATION forming part of Letters Patent No. 274,594, dated March 27, 1883.

Application filed August 4, 1882. (Specimens.)

To all whom it may concern:

Be it known that I, JACOB HARTNAGEL, of the city and State of New York, have invented an Improvement in the Manufacture of Window-Shades and Similar Articles, of which the following is a specification.

Window-shades have been prepared with a glue-sizing, so that designs may be applied upon the same in oil-colors, and in other instances the fabric has been painted or varnished with shellac all over, or in the portions that receive the design, and then the designs have been applied to the surface in oil-colors, sizing, and bronze, the glue or shellac in these instances being employed to fill the pores and prevent the penetration of the oil or colors; but this is objectionable, as it increases the cost and renders the shade stiff and harsh.

Efforts have been made to paint in oil upon brown and white holland and other starch-finished goods; but the oil, varnish, or other material employed for applying bronze or printing, stenciling, or painting designs upon such holland have struck through the fabric, giving an oily appearance on the back of the shade, and often spreading beyond the edges of the design and rendering the window-shade, curtain, or similar article unsalable.

My present invention is for the purpose of preventing the painting, printing, or stenciling from showing through the fabric, so that one side retains the ordinary appearance of the brown holland or similar starch-finished fabric and the other side has the designs in water-proof bronze and other printed or stenciled ornaments. These are applied by one operation, instead of requiring a glue-sizing or shellac varnish upon the entire surface, or so much thereof as is occupied by the design, as heretofore used, to prevent the oil or paint from striking through the fabric.

There is a material extensively sold in the market under the name of "patent driers," the same being of a semi-liquid form and somewhat resembling putty in color. I have discovered that when a compound is made of about five-eighths patent driers with three-eighths ordinary furniture-varnish a sizing is produced that can be applied directly to the surface of the hollands or other starch-finished

fabrics that will not strike through or stain the fabric, but will remain on the surface, and also be strong and adhesive, so as to receive bronze-powder, steel filings, flock, or other material in powder, and thus allow of the manufacture of ornamental shades and similar articles without any previous preparation of the fabric.

The parts which are to be bronzed are first printed or sized by the action of a brush and stencil. The bronze-powder is then rubbed on the surface and allowed to dry. The lines, figures, ornaments, leaves, scrolls, &c., that are used to form the borders or pattern are printed or stenciled and flock or metallic powder or steel filings, &c., are passed over the surface and adhere to the size. In all instances the foregoing compound of patent driers and varnish is used, except that in cases where the design is produced by printing it is preferable to add a small quantity of white lead to the compound before using the same, to give it the required body.

It will be found that the varnish causes the bronze or similar material to adhere firmly, and that the patent driers prevents the varnish striking through the window-shade or other article of starch-finished fabric.

The varnish which I employ, and herein termed "furniture-varnish," is of ordinary character, and usually made from kauri gum. The patent driers is a paste composed of boiled linseed-oil, sugar-of-lead, white lead, sulphate of baryta, and gilders' whiting. By mixing these materials as aforesaid a sizing having peculiar properties is obtained. There is sufficient body for receiving and holding the bronze-powder or flock, and it adheres to the starch-finished fabric without striking through, and there is sufficient elasticity to prevent scaling or cracking. I do not limit myself to the precise proportions or substances, as others having equivalent properties may be used.

I claim as my invention—

1. The method herein specified of manufacturing window-shades, consisting in starch-finish the fabric, then applying to one side thereof elastic water-proof sizing that will not strike through the fabric, but will allow the other side to remain free from stain or discoloration.

oration, and then spreading on such sizing bronze-powder or metallic dust or flock to ornament the window-shade, substantially as set forth.

- 5 2. As a new article of manufacture, a window-shade of a starch-finished fabric, having one side ornamented with elastic water-proof sizing and flock or metallic powder, and the other side of the fabric plain and free from

stain or discoloration, substantially as specified.

Signed by me this 31st day of July, A. D. 1882.

JACOB HARTNAGEL.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.