Sept. 19, 1933. M. PATT 1,927,272

SHADE

Filed May 24, 1932

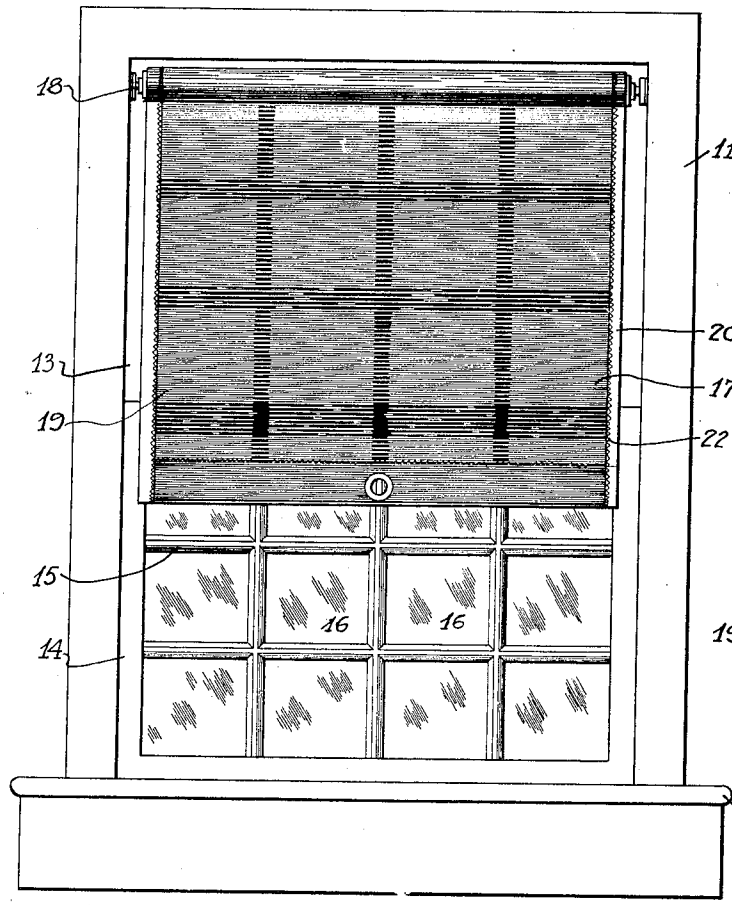


Fig. 1.

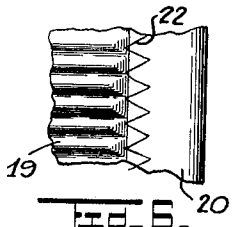


Fig. 6.

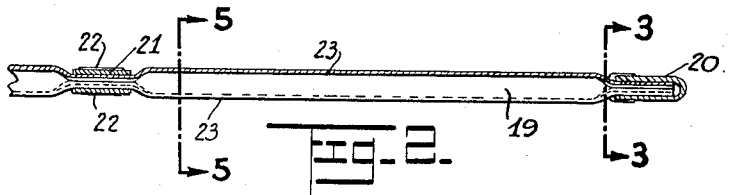


Fig. 2.

Fig. 3.

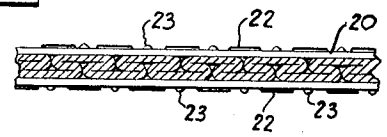
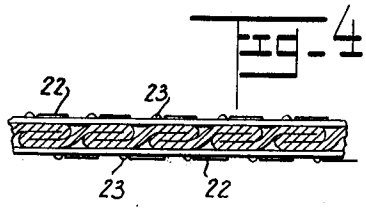


Fig. 4.



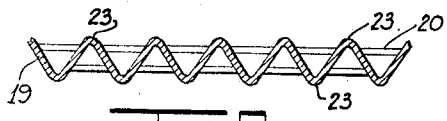


Fig. 5.

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Patented Sept. 19, 1933 1,927,272

UNITED STATES PATENT OFFICE

1,927,272

SHADE

Morris Patt, Brooklyn, N. Y.

Application May 24, 1932. Serial No. 613,155

5 Claims. (Cl. 156—10)

This invention relates to a novel kind of shading material; more particularly it concerns the adaptation of substantially transparent, flexible sheet material for the purpose of screens, shades, or other articles, which either serve to keep out or diffuse light, or which serve as partitions or shades which prevent the view of articles placed or located therebehind.

One object of this invention is to provide flexible shades or screens, which allow substantially free passage of light, but which still do not permit clear vision therethrough.

Another object of this invention is to fold transparent, flexible materials in such a way, so that it is merely translucent and to provide means to retain the said material in a shape in which an even translucency and pleasant appearance are preserved.

In order to attain these objects, transparent flexible material, like mica or a cellulose compound like cellulose acetate, is crimped, folded or pleated, and the pleated material is mounted or spacedly reenforced in such a manner that the pleats are permanently preserved.

The crimping or pleating makes a transparent sheet material bulkier and it is another object of this invention not to increase such bulkiness by the means which serve to retain the crimped or pleated material in the desired shape.

These and other objects will be more fully understood from the accompanying drawing, in which:

Fig. 1 shows a window in front of which a shade of my invention is partly drawn.

Fig. 2 shows a transverse cross-section of part of such a shade, which is reenforced by a binding intermediate to its ends.

Fig. 3 shows, in a detail longitudinal, cross-section, the manner in which a crimped material is bound.

Fig. 4 shows, in a similar view, a modification of the binding.

Fig. 5 shows the shade longitudinally cross-sectioned at a certain distance from the binding.

Fig. 6 shows an enlarged detailed view of the border of a shade of my invention.

Similar numerals refer to similar parts throughout the various views:—

In the drawing I show the conventional parts of a window, comprising a window frame 11, the sill 12, the upper and lower sashes 13 and 14, the sash bars 15, and the panes 16.

In front of that window I show the partly drawn shade 17, which incorporates my invention, and which is partly rolled up on a conventional roller shade mechanism 18.

The body of the shade is made of a substantially flat material which, in itself, allows the free passage of light. As extended before the window, the shade is however not transparent. The flat material thereof is transversely pleated, and the pleats obstruct vision through the shade, which thereby becomes translucent.

The shade may be pleated in any manner known; the pleating is exemplarily illustrated in Fig. 5 which shows a transparent material, cellulose acetate for instance, crimped in folds which are customarily termed "crystal pleats", with apices 23; fluted pleats, box pleats, etc., can of course be used just as well.

In order to retain the pleat in orderly, spaced fashion, the body of the shade is longitudinally bound. In Figure 1 I show a piping 20 for that purpose and it is understood, that for wide curtains or shades, such a binding may be applied intermediate to the sides, as illustrated by binding 21 in Fig. 2. Here the material of the corrugated or pleated shade is squashed flat,—without disturbing the pitch of the adjoining material,—where the binding 21 and piping 20 are applied thereto, so that they do substantially not protrude over the outsides of the apices of the shade material. The binding and piping are exemplarily fastened on and around the edge of the shade by stitches 22. The manner in which the squashed material 19 may fold, is indicated in Figs. 3 and 4.

If the pleats or corrugations are very fine, so that the material does not become too bulky at right angles to the plane of the sheet, it may be longitudinally bound by means which do not yield longitudinally,—without squashing the pleated material.

When the pleats or corrugations are however bulky, I prefer to squash the material where it is longitudinally bound, particularly when a longitudinally unyielding binding is to be extended over the shade.

In the case of some materials which are adapted for use in my invention, the pleats are produced in the sheet material under application of heat. Some materials of this kind, cellulose acetate for instance, may be controlledly heated to a point where they soften or where the surface softens and becomes sticky or where they begin to flow. In such an instance the squashed material, be it folded in the manner of Fig. 3, Fig. 4 or in any other manner, may be heated while

being squashed, so that the folds of the squashed material are glued, or flow together.

The same result may of course be obtained with or without the application of heat by the application of a suitable mucilaginous material or cement.

It is also understood that, if the squashed material is bound together by cementing or fusion, it may not be necessary to cover up the squashed part by the bindings 20 and 21 shown in the drawing. It is further understood that the squashed material, if it is heated to such a degree that it flows, may be melted into a suitable bead which borders the shade or extends longitudinally therethrough and which longitudinally binds the pleats or corrugations of the shade.

The squashing, where it is applied intermediate to the sides of the shade, or at the border thereof, does not of course have to follow the straight longitudinal lines in which it is shown at the piping 20 and at the binding 21, but it may also be applied in designs which change and which may follow a curved line, a zig-zag line for instance.

While I have shown and described my invention with some degree of particularity, it will be realized that other modifications and changes may be resorted to under special conditions. I therefore do not wish to be limited and restricted to the exact details shown and described, but reserve the right to make such changes and modifications as may fairly fall within the scope of the subject matter now being claimed.

What I claim is:—

1. A translucent shade made of transversely pleated substantially transparent material.

2. A translucent shade comprising transversely pleated substantially transparent material, and longitudinal sections along which said pleated material is squashed and bound.

3. A translucent shade comprising transversely pleated substantialy transparent material, and longitudinal sections along which said pleated material is squashed, overlapping parts of said squashed material being bound together.

4. A translucent shade comprising transversely pleated substantially transparent material, and longitudinal sections along which said pleated material is squashed, overlapping parts of said squashed material being cemented together.

5. A translucent shade comprising transversely pleated substantially transparent material, and longitudinal sections along which said pleated material is squashed, overlapping parts of said squashed material being fused together.

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