Jan. 10, 1939. E. J. MARTENS 2,143,382

WINDOW SHADE

Filed Jan. 9, 1935 2 Sheets-Sheet 1

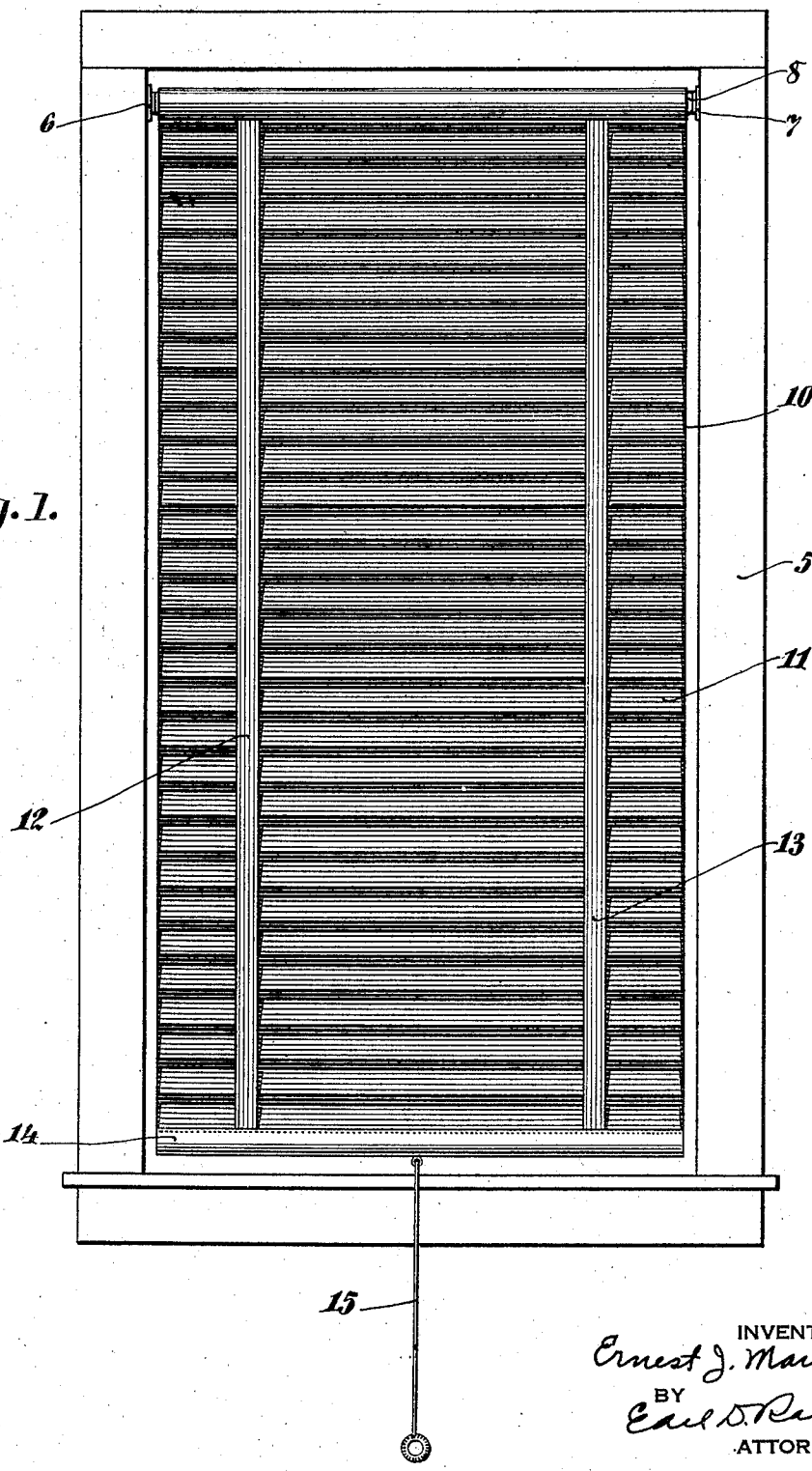


Fig. 1.

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Filed Jan. 9, 1935 2 Sheets-Sheet 2

Fig. 2.

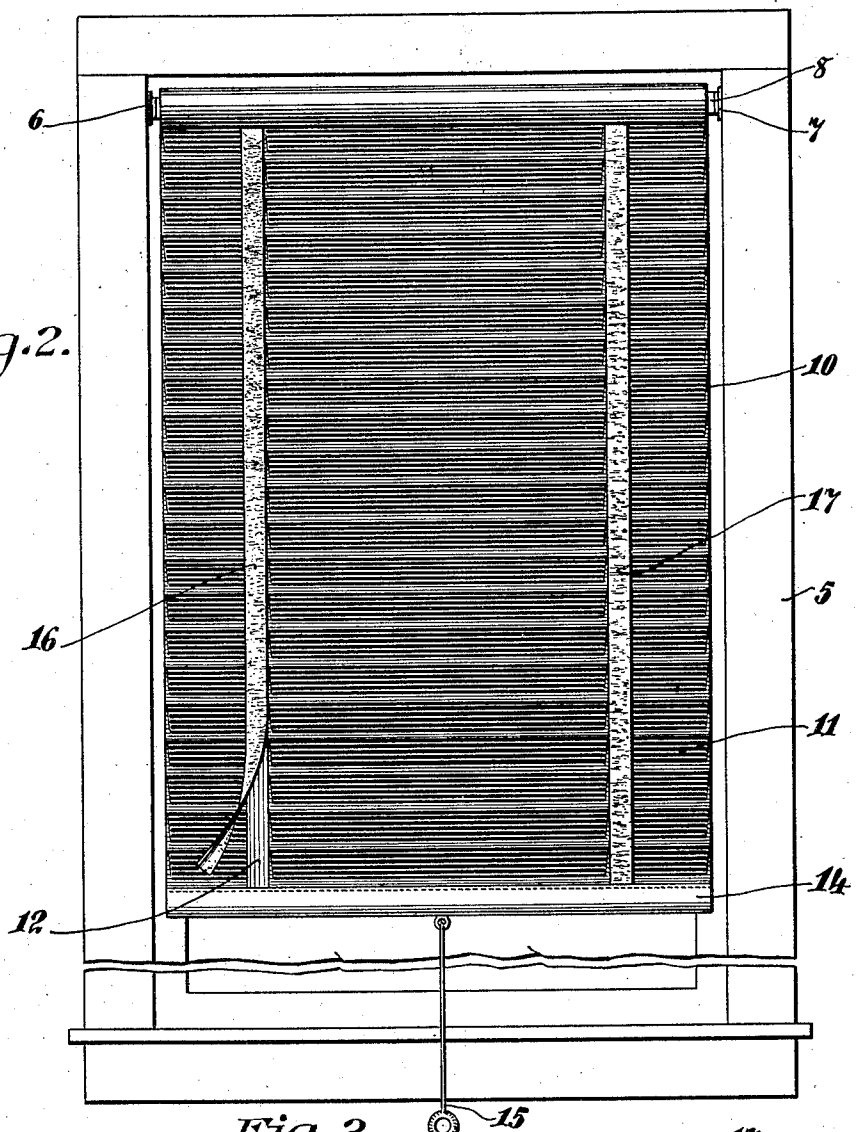
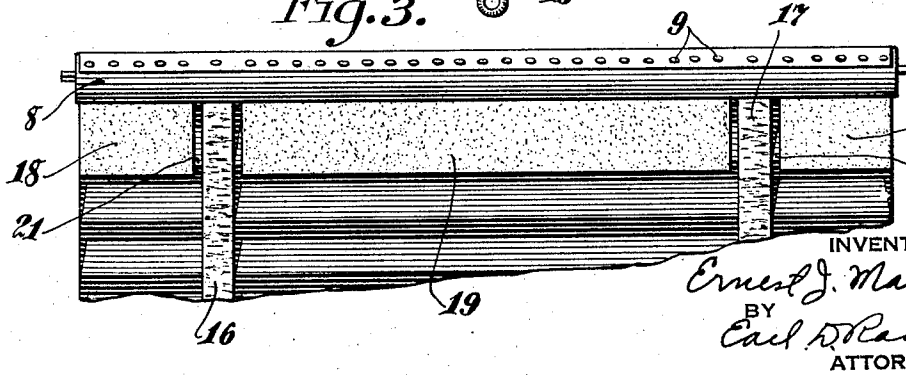


Fig. 3.



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WINDOW SHADE

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17 Claims. (Cl. 156—10)

This invention relates to window shades of the flexible type, which are commonly suspended from and rolled around a spring roller, and in particular to such a shade in simulation of a Venetian blind.

Venetian blinds are used primarily for decorative purposes as they impart a pleasing appearance to windows equipped with them. Also a desirable feature in Venetian blinds is the provision for control and modulation of light passing through the slats thereof. Certain inherent disadvantages however, prevent their becoming universal of adoption. Such blinds are costly of manufacture, are bulky when in use, are dust collectors, and are difficult of cleansing by the average housekeeper.

The conventional window shade while possessing none of the disadvantages of the Venetian blind has little or no decorative value and its drab appearance is usually out of harmony with any plan of interior decoration or color scheme and thus soon becomes tiresome of appearance. Also such a shade has no provision for control and modulation of light, other than to expose the window by rolling up the shade.

I propose to provide a window shade of the conventional type having printed or painted or otherwise delineated thereon, bands of color in simulation of the slats and tapes of a Venetian blind, and thereby combine the decorative and light modulation features of such a blind with the advantages of the conventional rolling window shade, but having the disadvantages of neither.

I also propose to provide in such a window shade means for changing the appearance of the tapes delineated thereon by and at the will of the housekeeper, in order that the appearance of the shade can be varied from time to time.

I also propose to provide such a window shade for interchanging with the present conventional window shade, that is, the housekeeper may purchase any desired length or width of the printed or painted material and attach it to the present shade roller, thus deriving the advantages of a window shade simulating a Venetian blind at small cost.

It is therefore a primary object of my invention to provide a conventional window shade having bands of color delineated thereon in simulation of the slats and tapes of a Venetian blind.

Another object of my invention is to provide in a conventional window shade a multicolor simulation of a Venetian blind.

Another object of my invention is to provide a conventional window shade of one color, having printed, painted or otherwise delineated thereover bands of color of different colors in simulation of the slats and tapes of a Venetian blind.

Another object of my invention is to provide a conventional window shade having front and back surfaces printed, painted or otherwise processed in the same or different color combinations.

Another object of my invention is to provide in a conventional window shade removable and replaceable tapes of appearance simulating the tapes of a Venetian blind.

Another object of my invention is to provide a conventional window shade in simulation of a Venetian blind, the printed or painted bands thereof being shaded to give an interior effect of reflected lamp light within a room against the inner side thereof or to give the interior effect of sunlight against the outer side thereof.

Another object of my invention is to provide a conventional window shade having bands of color printed, painted or otherwise delineated thereon in lights and shadows in simulation of the slats and tapes of a Venetian blind, the shadows thereof reflecting outside daylight and inside lamp light and the lights thereof permitting the passage through the shade of controlled daylight or lamp light.

Another object of my invention is to provide equalizing means for a window shade having tapes mounted thereon, said equalizing means compensating for the additional thickness given to the shade at the point of attachment of said tapes.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the appended claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being understood, however, that no limitation is necessarily made to the precise structual details therein shown but that alterations and modifications within the scope of the appended claims may be resorted to when desired.

In the drawings:

Fig. 1 is a front view in elevation of a conventional window shade having printed, painted or otherwise delineated thereon bands of color

in simulation of the slats and tapes of a Venetian blind, and showing the conventional mounting of a window shade in a window frame and casing. In this view the bands of color are printed, painted or otherwise delineated on the shade material to indicate a downward and outward slant thereto and the reflection therefrom of lamp light in a room;

Fig. 2 is a front view in elevation, similar to Fig. 1 but showing the printed, painted or otherwise processed bands of color of the window shade slanted upwardly and outwardly and giving the effect of sunlight against the outside of the shade. Also shown in Fig. 2 are tapes adhesively mounted on the shade; and

Fig. 3 is an enlarged fragmentary view showing a conventional shade roller and the manner of attaching the window shade to same. Also shown in Fig. 3 is the equalizing means and manner of attachment thereof when tapes are adhesively attached to the window shade.

Referring to the drawings in detail wherein similar reference characters designate corresponding parts throughout the several views; 5 is a window frame and casing, to the inner walls of which are attached the well known spring roller brackets 6 and 7. Supported by and operating in brackets 6 and 7, is the usual window shade spring roller 8, to which is attached in the well known manner as by tacks 9, my improved window shade 10 having printed, painted or otherwise delineated thereon bands of color 11, and bands of color 12 and 13, in simulation of the slats and tapes of a Venetian blind. Window shade 10, is equipped in the usual manner with shade stick 14, and pull cord 15. 16 and 17 are adhesive tapes of material simulating the fabric of the tapes of a Venetian blind, and which if desired, may be mounted directly over imitation tapes 12 and 13 respectively when it is desired to change the appearance in color or texture thereof. While any tape and adhesive or adhesive tape may be used, I have found the well known "Scotch tape" (a trade name) well suited for my purpose in that it is flexible, has excellent adhesive qualities and due to its non-drying character, may be removed at any time for replacement by new tape of the same or other color and texture. Obviously when tapes 16 and 17 are mounted on the shade 10, an appreciable additional thickness is given to the shade at the points of mounting. This is of no moment in heavy shade materials, but in the lighter weights of shade materials a tendency to wave or wrinkle is observed when the shade 10 is rolled up on spring roller 8. To obviate this difficulty when tapes 16 and 17 are mounted on the shade 10, I provide equalizing filler pieces 18, 19 and 20 of felt or other suitable material which are disposed outwardly of and between tapes 16 and 17, and are attached under shade 10, and to spring roller 8, by tacks 9. When shade 10 is rolled up on spring roller 8, the filler pieces 18, 19 and 20 are rolled between the first laps of the shade 10 and are hidden from view. It is obvious that spaces 21 and 22 between filler pieces 18 and 19, and 19 and 20 provide for the additional thickness given by tapes 16 and 17 to shade 10.

Particular reference is now made to shade 10 which may be of paper, or oil opaque, Holland or washable shade cloth or other suitable material. As before pointed out, the bands of color 11 and bands of color 12 and 13 are printed, painted or otherwise delineated on shade 10. For purposes of brevity in description I now propose to confine myself to printing, it being understood however, that printing shall broadly include other methods of obtaining an equivalent result.

Window shades of translucent or opaque materials may be obtained in many colors. I find, that using the shade material color as a foundation color, and printing bands on the shade material in color of deeper tone than the foundation color, and having shadows at the top of the bands of color, will give the effect of the slats of a Venetian blind reflecting lamp light within a room, and that by printing the bands in color of deeper tone than the foundation color, and having lights at the top of the bands, gives the effect of sunlight against the slats on the outside of a Venetian blind. I also find that leaving unprinted the delineations indicated as 12 and 13, gives the effect in bands of foundation color of tapes which lend to the simulation of a Venetian blind. I also find that casting the lights and shadows and tones thereof to indicate a downward slant as shown in Fig. 1 or an upward slant as shown in Fig. 2 of the bands of color, greatly adds to the simulation of the lights and shadows of a Venetian blind.

The foregoing is indicative of the results that may be obtained through single color printing. By the use of two color or multicolor printing any desired shading or combination of color tones is available. For illustration bands 12 and 13 may be made a different color than that of either the foundation color or bands of color 11. Also it is obvious that by use of two color or multicolor printing, the lights and shadows and effects may be enhanced by the super imposition of color over color.

It is also pointed out that my improved shade may be printed to simulate a Venetian blind on either or both sides of the shade, thus giving the choice of an exterior and interior effect of a Venetian blind or a plain exterior and an interior of blind effect. Also my improved shade may be printed on duplex cloth (viz: different foundation colors on each side) which makes possible having shades with interiors simulating Venetian blinds of different colors to harmonize with the color schemes of different rooms, and presenting an exterior of uniform color, either printed in simulation of a Venetian blind, or left in natural color.

In addition to the effects that are obtained as before set forth, I find that a translucent material gives a striking optical effect when bands of color are printed thereon in simulation of the slats and tapes of a Venetian blind. The proper selection of colors, and the printing of lights and shadows in various tones on the shade material, allows outside daylight or inside lamp light against my improved shade, to reflect from the shadows thereof, or pass through the lights thereof, and such modulation of light gives the much desired effect of light passing the slightly tilted edges of the slats of a Venetian blind. This is not a mere printing operation, but a definite control of light reflection and penetration, accomplished through the imposition of controlled colors in controlled places, and by which the intensity of the light is controlled to yield effects in light modulation substantially the same as those obtained through use of a Venetian blind.

As before pointed out adhesive tapes 16 and 17 may be mounted over printed delineated tapes 12 and 13 or over the foundation color if 12 and 13 are not printed on the shade, in order to pro-

vide color or texture of tapes to harmonize with any decorative plan or color scheme.

It will appear from the foregoing description that I have provided a window shade of the conventional flexible rolling type printed in simulation of a Venetian blind, and simulating the slats and tapes thereof, and the lights and shadows thereof, and providing for the control and modulation of light reflecting from or passing through the bands of color thereon and said shade.

It will also appear that I have provided in such a shade a printed opaque shade in simulation of a Venetian blind, which by color control and printed lights and shadows in various tones, provides reflection simulating outside daylight or inside lamp light against a Venetian blind.

It will also appear that I have provided removable and replaceable tapes for adhesive mounting on such a shade, in order to vary the color and texture thereof at will, and it will also appear that I have provided means for compensating for the additional thickness given to the shade at the points of mounting such tapes.

It will also appear that I have provided in such a shade a duplex cloth having different interior and exterior foundation colors which may be printed in simulation of a Venetian blind on the exterior thereof to conform with the interior thereof or which may be left plain on the exterior side thereof.

It will also appear that I have provided in such a shade, an interior in simulation of a Venetian blind in one color combination of lights and shadows, and an exterior of the same or a different color combination, or in plain foundation color.

It will also appear that I have provided in such a shade a simulation of a Venetian blind which, while avoiding the disadvantages in bulk, cost and difficulty in cleansing of the Venetian blind, nevertheless substantially provides its advantages in decorative and light modulating features.

Having thus described my invention and pointed out the features which are new, what I claim is:—

1. A window shade comprising a sheet of translucent shade material having delineated thereon a plurality of successive alternate light and shadow effects, in simulation of the slats of a Venetian blind, said delineations forming obstructions of graduated effectiveness to the passage of light through said material.

2. A window shade comprising a sheet of translucent shade material having delineated thereon a plurality of successive bands of color, in simulation of the slats of a Venetian blind, said bands of color being varied in intensity to form obstructions of graduated effectiveness to the passage of light through said material.

3. A window shade comprising a sheet of translucent shade material having delineated thereon a plurality of horizontally disposed successive bands of color, and a plurality of vertically disposed bands of color, in simulation of the slats and tapes of a Venetian blind, said horizontal bands of color being varied in intensity to form obstructions of graduated effectiveness to the passage of light through said material.

4. In a window shade, a sheet of shade material having delineated thereon a plurality of successive bands of color, in simulation of the slats of a Venetian blind, and a plurality of tapes adhesively mounted on said shade material, over said bands of color.

5. In a window shade, a sheet of shade material having delineated thereon a plurality of horizontally disposed successive bands of color, and a plurality of vertically disposed bands of color, in simulation of the slats and tapes of a Venetian blind, and tapes adhesively mounted over the delineated tapes.

6. A window shade comprising a sheet of shade material having delineated on both sides thereof, a plurality of horizontally disposed successive bands of color and a plurality of vertically disposed bands of color, in simulation of the slats and tapes of the interior and exterior of a Venetian blind, said horizontal bands of color being varied in intensity to form obstructions of graduated effectiveness to the passage of light through said material.

7. A window shade comprising a sheet of translucent shade material having a front and back of different colors, and a plurality of horizontally disposed successive bands of color and a plurality of vertically disposed bands of color delineated on the front side thereof, in simulation of the slats and tapes of a Venetian blind, said horizontal bands of color being varied in intensity to form obstructions of graduated effectiveness to the passage of light through said material.

8. In a window shade, a sheet of shade material having tapes mounted thereon and longitudinally thereof, said tapes imparting additional thickness to said shade material throughout the areas covered thereby, a roller to which one end of said shade material is attached and around which it and the tapes mounted thereon are rolled, and equalizing means around said roller and spaced away from said tapes providing additional diameter to said roller substantially equal to the thickness of the tape mounted on said shade material when said shade material is rolled around said roller.

9. A window shade comprising a sheet of shade material having printed thereon a plurality of horizontally disposed successive bands of color, each of said bands having a clearly defined straight and uniform edge, and the zone adjacent said edge having the maximum in density of the printed color, and said color progressively diminishing in density toward the other edge of said bands, to form a well defined zone of translucency adjacent the next succeeding band of color.

10. In a window shade for yielding a Venetian blind effect by interrupting transfer of light in a controlled manner, a sheet of shade material having a plurality of horizontally disposed successive bands delineated thereon, each of said bands being characterized by one of the edges thereof being well defined in intensity, and the intensity diminishing therefrom in variable degree toward the other of the edges, and at the one of the edges thereof having well defined intensity there are impressed pigments which yield opacity, while toward the other of the edges thereof the opacity diminishes to form adjacent the next succeeding band a well defined zone of translucency, and a plurality of vertically disposed bands delineated on said shade material, which are substantially constant throughout their length as regards luminous effect.

11. In a window shade for yielding a Venetian blind effect by interrupting transfer of light in a controlled manner, a sheet of shade material

having a plurality of horizontally disposed successive bands delineated thereon, each of said bands being characterized by one of the edges thereof being well defined in intensity, and the intensity diminishing therefrom in variable degree to the other of the edges, and at the one of the edges thereof having well defined intensity there are impressed pigments which yield opacity, while toward the other of the edges thereof the opacity diminishes to form adjacent the next succeeding band a well defined zone of translucency, and a plurality of vertically disposed bands delineated on said shade material which are of distinguishable color and opaque throughout their length.

12. A window shade comprising a sheet of translucent shade material of one color having a plurality of horizontally disposed successive bands and a plurality of vertically disposed bands printed thereon in colors distinguishable from each other and distinguishable from the color of the shade material, and in simulation of the slats and tapes of a Venetian blind, and said horizontal bands of color being varied in intensity to form obstructions of graduated effectiveness to the passage of light through said material.

13. A window shade comprising a sheet of shade material having a plurality of horizontally disposed bands and a plurality of vertically disposed bands printed thereon in simulation of the slats and tapes of a Venetian blind, said bands having lights and shadows and said lights and shadows providing for the control and modulation of light reflecting from, or passing through, the simulated slats and said shade material.

14. A window shade comprising a sheet of translucent shade material having a foundation color, a plurality of successive bands printed thereon in another color, said last named color being varied in intensity to form obstructions of graduated ecectiveness to the passage of light through said material and thereby simulate tones from lights to shadows, and said last named color being disposed with relation to the formation of said bands to give an interior effect to the shade of reflecting lamp light within a room against the slats of a Venetian blind.

15. A window shade comprising a sheet of translucent shade material having a foundation color, a plurality of successive bands printed thereon in another color, said last named color being varied in intensity to form obstructions of graduated effectiveness to the pasage of light through said material and thereby simulate tones from lights to shadows, and said last named color being disposed with relation to the formation of said bands to give an interior effect to the shade of sunlight against the exterior of a Venetian blind.

16. A window shade comprising a sheet of translucent shade material having a foundation color, a plurality of horizontally disposed successive bands printed thereon in another color to represent outwardly and downwardly slanting slats, said last named color being varied in intensity to form obstructions of graduated effectiveness to the passage of light through said material and thereby simulate tones from lights to shadows, and said last named color being disposed with relation to the formation of said bands to give an interior effect to the shade of reflecting lamp light within a room against the slats of a Venetian blind.

17. A window shade comprising a sheet of shade material having a foundation color, a plurality of horizontally disposed successive bands printed thereon in another color to represent outwardly and upwardly slanting slats, said last named color being varied in intensity to form obstructions of graduated effectiveness to the passage of light through said material and thereby simulate tones from lights to shadows, and said last named color being disposed with relation to the formation of said bands to give an interior effect to the shade of sunlight against the exterior of a Venetian blind.

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