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VENTILATING BLACKOUT ROLLER SHADE

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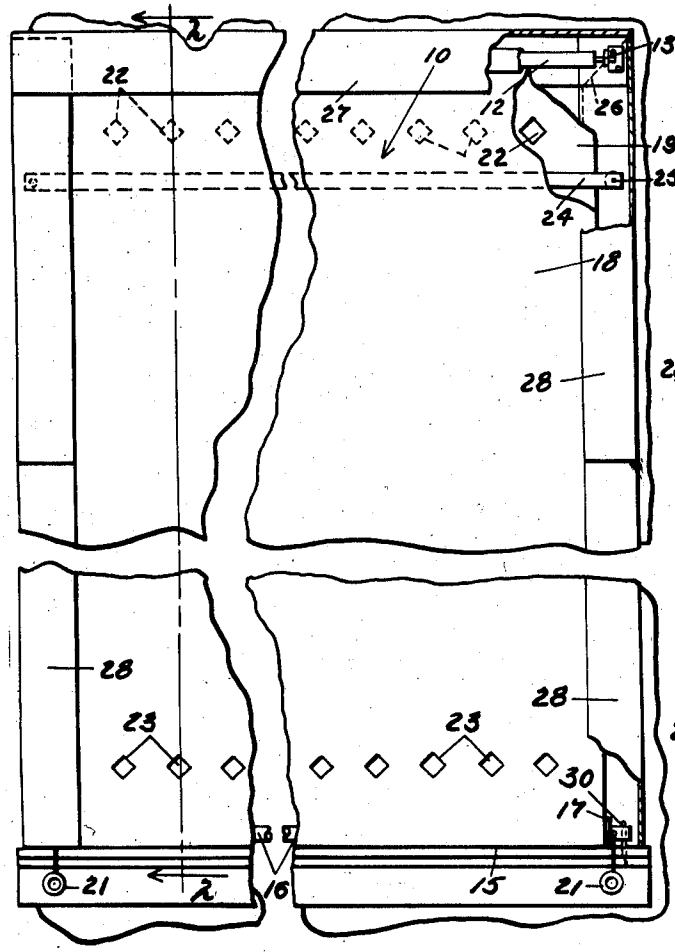


Fig 1

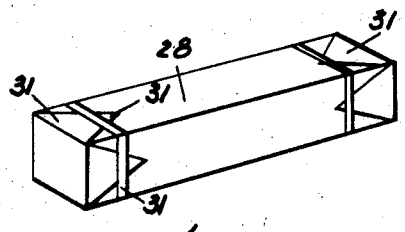


Fig 3

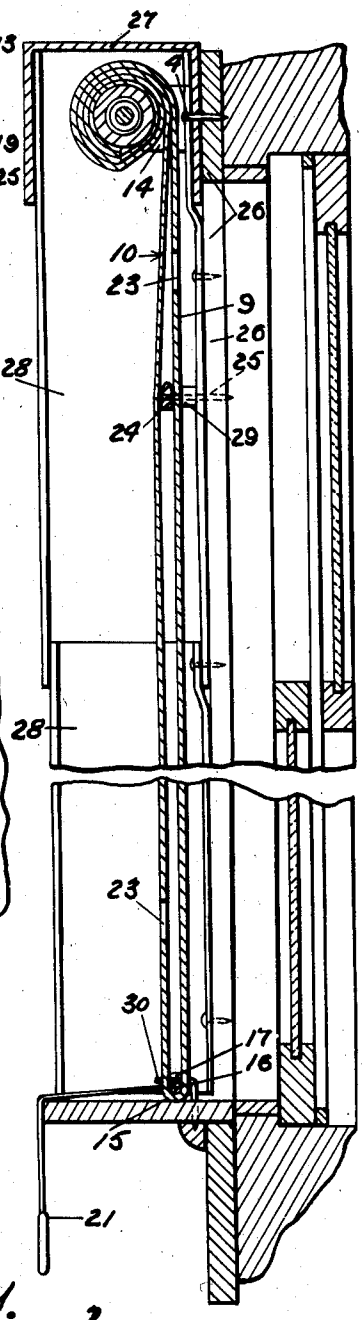


Fig 2

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VENTILATING BLACK-OUT ROLLER SHADE

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8 Claims. (Cl. 160—121)

The present invention relates to window shades, particularly of the kind commonly known as roller shades, and has for an object the provision of shades of the character that are effective to completely block the passage of all light rays from the interior of an illuminated room through the windows, while at the same time providing for privacy and good ventilation if the window is open during the day or night season.

Another object of the invention is to provide a roller shade which requires no special machinery for its manufacture, and which can be speedily assembled.

A still further object is to provide a blackout ventilating window fixture that is inexpensive, easily installed and easily manipulated.

These and other important objects are attained by the means described herein and exemplified in the accompanying drawing, in which:

Fig. 1 is an inside elevational view of a window provided with a ventilating blackout roller shade of the invention, part being broken away.

Fig. 2 is a cross-sectional view taken on line 2—2 of Fig. 1, part being broken away.

Fig. 3 is a perspective view of the fixture as a self-contained package.

The ventilating blackout window shade of the present invention is adapted to rapid, large-scale production and may be constructed of conventional materials heretofore employed in the manufacture of window shades of the roller type, e. g. conventional shade rollers of the spring retracted type, webs of shade cloth or shade paper in dark, non-light reflecting colors, and the usu- sticks commonly used in the bottom hem of roller shades. The accessory parts for shielding the edges of the shade in use and for holding it down tightly to the window sill are likewise of inexpensive and readily available materials and they constitute the principal packaging material for the fixture in storage and shipping.

Referring now to the drawing, the shade of the invention is indicated generally at 10 and is mounted on the window frame 26 in known manner by supporting the spring shade roller 12 in the conventional shade roller brackets 13 and 14.

The web or body of the shade 10 comprises a single piece of opaque shade material folded intermediate its ends at 15 while the free ends are secured to the shade roller 12 by any suitable means, as by staples, adhesive strips, etc., (not detailed).

In the fold at 15 there is inserted a bottom dowel stick 16 which is somewhat longer than the width of the shade web and provided with a disc member 17 near each end to retain the loose dowel stick 16 against endwise movement. Instead of stitching the front and rear panels 18 and 19 together to form the usual hem in which the bottom stick is usually slidably inserted, I leave the open groove between the panels in which the dowel stick 16 is gravitationally held down in the bottom of fold 15. Shade pulls such as 21 are applied to the stick or dowel 16 just beyond the discs 17. The front and rear panels thus are spaced slightly one from the other at the bottom. Ventilating apertures 22 are disposed near the top of rear panel 19 and other ventilating apertures 23 are disposed near the bottom of front panel 18. The panels are of dark color and non-reflecting finish; hence it is practically impossible to pass direct light rays or reflected light from the inside of an illuminated room through the widely spaced and staggered apertures in the front and rear panels to the outside of the building when such a shade is operatively mounted before the window.

The space between the panels is small, e. g., of the order of one-fourth inch, but it affords easy passage for air currents when ventilation is required.

The shade is mounted, as indicated heretofore, and a free spacer stick 24, which is of about the same length as dowelstick 16, is passed between panels 18 and 19 and this stick 24 is then fastened by nails or the like 25 to assume a fixed horizontal position across the window at a suitable level below the shade roller 12.

Tacked or otherwise mounted on the window frame 26 are channel shaped members 27 and 28. Channel 27 is disposed as an inverted hood over the shade roller, while channels 28 are arranged at the sides of the frame with the openings arranged to house the free vertical edges of the shade as it is raised and lowered.

The fixed cross member or stick 24 terminates at opposite ends in the channels 28 and desirably has spacer washers 29 behind its end portions to permit passage of the rear shade panel 19 behind the stick 24.

In practice I prefer to either disable or omit from the shade roller the well known catch whereby the shade is held at intermediate positions, but I retain the spring winding mechanism of the roller shade 12. The roller thus arranged constantly urges the shade to a fully rolled and raised position. The stick or cross member 24 is encountered by dowel stick 16 how-

ever, and this keeps the shade in a partly lowered position when not otherwise held from below.

In the sill or in the frame of the window hooks **30** are positioned so that the protruding opposite ends beyond discs **17** of the dowel stick may be engaged under the hooks and thus tightly hold the shade in a fully lowered position snug against the sill.

The channels **27** and **28** may be cheaply constructed of dark, dull-finished material, e. g., wood, metal or heavy pressed paper stock. I prefer to use black pressed paper stock for the channels since these channels **27** and **28** may be originally placed around the rolled up shade to serve as a container package and thus largely eliminate the individual wrapping materials for the shades in handling and shipping. The channels **28** are made in several sections each, which sections may be about the same length as channel **27**. The finished package, as shown in Fig. 3, is held secure by a few strips of adhesive tape **31**. A degree of mutual protection against crushing is afforded by the shade and the channel members when thus packaged.

The selection of materials and the specific arrangement of parts will be understood to be subject to some variation in order to accommodate the window fixture of the invention to various types of windows, all within the spirit of this invention and the scope of the appended claims.

The operation of the device is readily understood. If, during the enforced darkening of a community, the user desires to illuminate a room without sacrificing the advantages of ventilation, the window is opened before pulling the shade. Then the bottom dowel stick **16** of the shade is engaged beneath hooks **30** and the spring shade roller holds both panels taut while stick **16** and cross member **24** keep the panels spaced to form a sort of ventilating flue between them. When the shade is rolled up, the outermost web rolls up to a greater extent than the innermost web and the fold or groove at **15** likewise shifts. The bottom dowel stick is free to accommodate this movement of the webs during such raising and lowering movement of the shade.

What is claimed is:

1. In a ventilating blackout fixture for a window, channel members fixed about the top and sides of the window, a shade roller mounted within the top channel, a fixed cross member parallel with the shade roller below said roller, a pair of shade panels fixed in superposed relation on said roller and passing on opposite sides of the fixed cross member, a bottom free roller stick disposed between the panels and means for releasably engaging said bottom stick when the shade is in fully lowered position.

2. In a ventilating blackout window shade the combination of a shade roller, a pair of superposed panels secured at the tops thereof to said roller, a bottom dowel stick between the panels at the bottom of the shade and a cross member extending freely between the panels in parallelism with the roller whereby the panels are spaced when the shade is drawn.

3. In a ventilating blackout window shade the combination of a shade roller, a pair of superposed panels secured at the tops thereof to said roller, a bottom stick between the panels at the bottoms thereof and a cross member extending freely between the panels in parallelism with the roller whereby the panels are spaced when the shade is drawn, said panels having staggered ventilating openings therein precluding passage of light through the shade.

4. In a ventilating blackout window shade and package therefor the combination of a roller shade comprising a roller and two superposed panels secured to the roller, a cross member passing between the panels and adapted for fixed mounting in parallelism with the roller for spacing the panels, a bottom stick spacing the panels at the bottom, and a plurality of elongated channel shaped members serving selectively as the principal packaging members for the shade and as top and side shields to embrace the top and sides of the shade in use.

5. In a ventilating blackout roller shade the combination of a shade roller, a pair of superposed panels secured to the roller at the top edges, means for spacing the panels at the bottom, and means adapted to be fixed in substantial parallelism with the roller for spacing the panels intermediate the top and bottom edges thereof.

6. In a ventilating blackout roller shade the combination of a shade roller, a pair of superposed panels secured to the roller at the top edges, means between the panels for spacing them at the bottom, means adapted to be fixed in substantial parallelism with the roller for spacing the panels intermediate the top and bottom edges thereof, and channel shaped members adapted for mounting about a window opening for embracing the top and side edges of the shade to preclude passage of light rays and permit the flow of air between the panels.

7. In a ventilating blackout roller shade the combination of a shade roller, a pair of superposed panels secured to the roller at the top edges, means between the panels for spacing them at the bottom, means adapted to be fixed in substantial parallelism with the roller for spacing the panels intermediate the top and bottom edges thereof, and channel shaped members adapted for mounting about a window opening for embracing the top and side edges of the shade to preclude passage of light rays and permit the flow of air between the panels, said panels having non-registering ventilating apertures therein.

8. In a ventilating blackout roller shade a spring shade roller, a shade web folded intermediate its ends and having coinciding ends secured to the said roller whereby a front panel and a rear panel are formed, said panels having non-registering ventilating openings, a cross member passing between the panels and adapted to be fixedly mounted in parallelism with the roller for spacing the panels, a loose dowel member resting in the fold of the shade web and serving as a bottom stick for spacing the panels at the bottom of the shade, disc members on the dowel member limiting endwise movement thereof in the said fold and means to releasably hold the free ends of the dowel member for retaining the panels taut against the pull of the spring shade roller.

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