

Feb. 28, 1933.

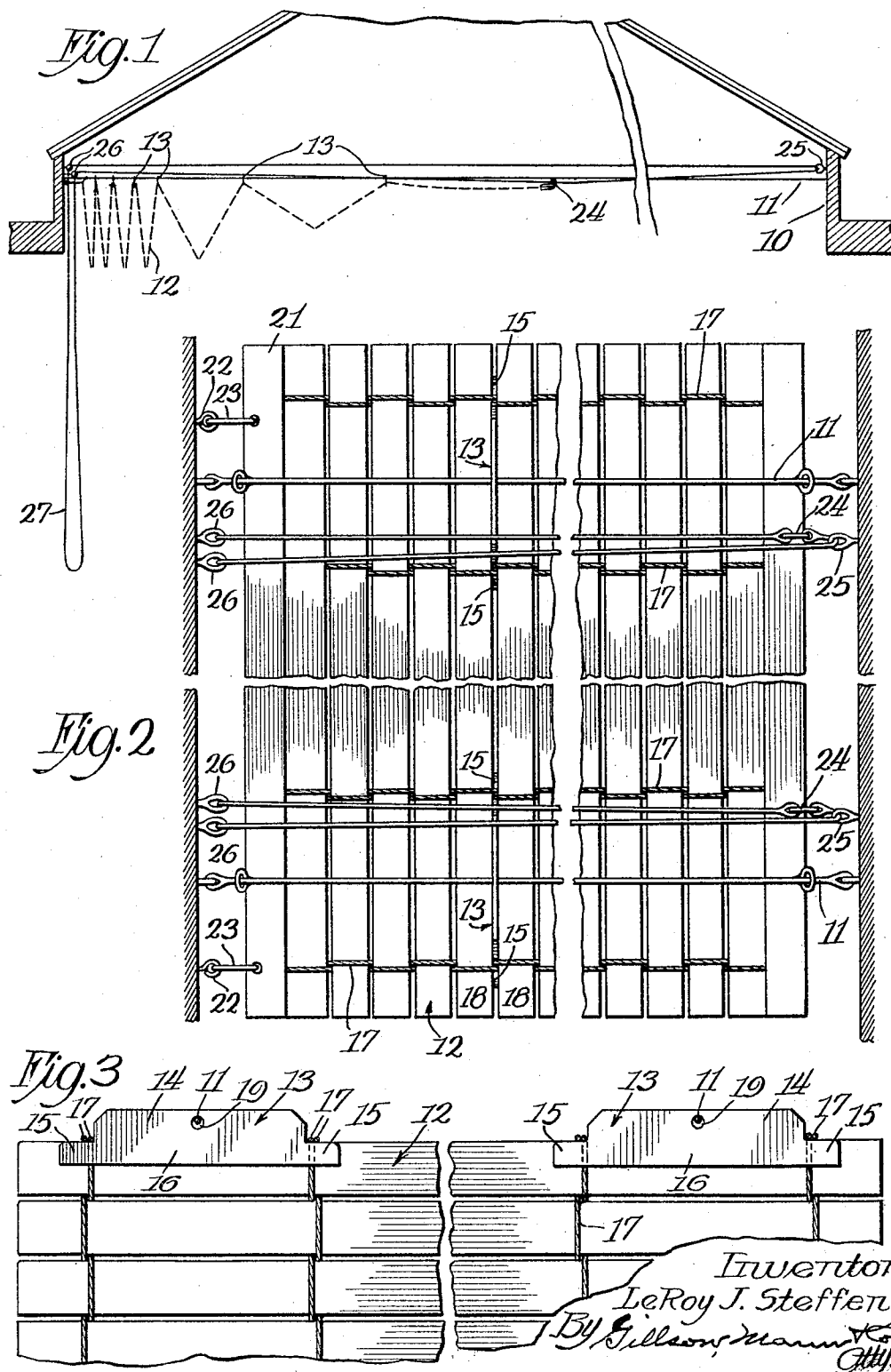
LE ROY J. STEFFEN

1,899,062

SPLINT SHADE SUPPORT

Filed Sept. 24, 1930

2 Sheets-Sheet 1



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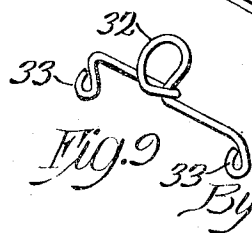
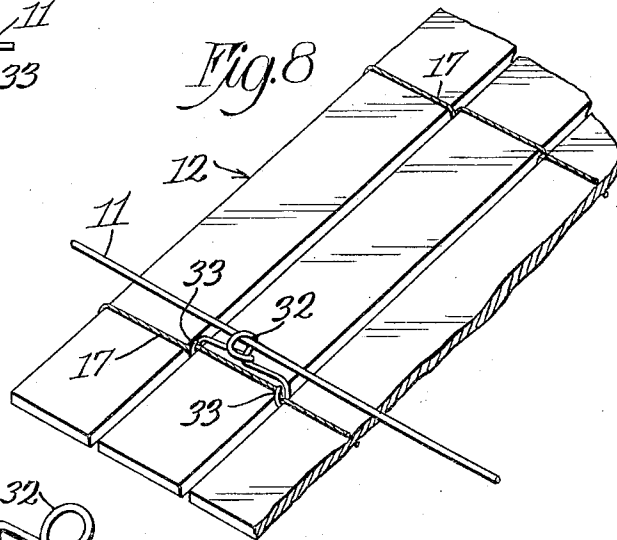
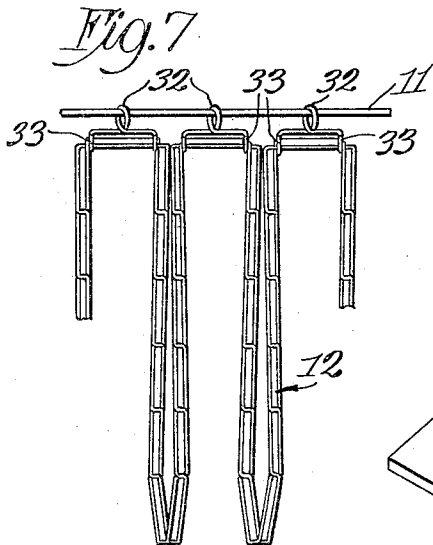
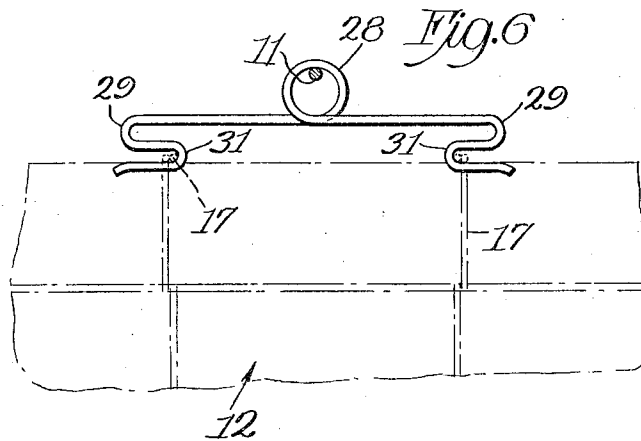
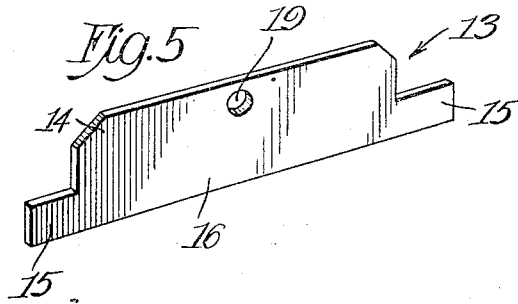
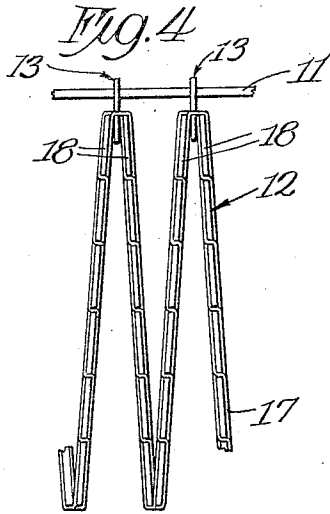
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2 Sheets-Sheet 2



Inventor
Le Roy J. Steffen
By Nelson, Mann & Co.
Attys.

UNITED STATES PATENT OFFICE

LEROY J. STEFFEN, OF EVANSTON, ILLINOIS, ASSIGNOR TO HOUGH SHADE CORPORATION,
A CORPORATION OF CONNECTICUT

SPLINT SHADE SUPPORT

Application filed September 24, 1930. Serial No. 484,136.

The objects of the present invention are to furnish means with which splint shades may be installed in a framed opening of sky lights; to install the shades in such an opening utilizing less head space than previously has been necessary; to allow the extended shade to lie in a plane parallel to the floor; to obviate the uncertainty of operation when rolled shades are used with sky lights; to provide a hanger which will slide easily along the supporting elements and which will avoid any undue wear upon the splints and particularly upon the warp cords of the shade.

These and other objects and advantages will become apparent as the disclosure proceeds and the description is read in conjunction with the accompanying drawings, in which

Fig. 1 illustrates a roof section and sky light with a splint shade installed therein utilizing my improved means;

Fig. 2 is a top view of the extended shade as installed in the sky light of Fig. 1;

Fig. 3 illustrates the hangers as applied to the shade and shows the form of hanger which I prefer.

Fig. 4 shows a section of the folded shade hung from the supports;

Fig. 5 is a perspective view of one of the hangers;

Fig. 6 illustrates a modified form of hanger showing the mode of application to a splint shade;

Figs. 7, 8 and 9 illustrate a further modification in which the hanger maintains the splints in a horizontal position.

Splint shades because of their rigidity and strength are particularly adapted to shade large window areas in industrial plants. Since many plants receive most of their light through sky lights which are usually in the A or saw-tooth form, it is desirable that a splint shade should be adapted for installation in such a manner that it can screen the opening properly. It is, of course, remembered that the ordinary splint shade is arranged to roll around a bottom batten when the draw cords passing over pulleys at the top of the window frame are pulled.

Previously, when shades have been installed in sky lights, the same roll mechanism has been used and wires have been stretched across the opening, but at a very substantial angle so that when the draw cords are released, the shade will roll down upon the incline and be extended. It is frequently difficult to secure sufficient incline to make the operation of the shade certain, particularly so if shafting and pulleys are installed close to the ceiling.

Unless the incline is quite steep, the shade will stick. The operator then endeavors to extend the shade by poking it with poles which damage it severely, and the practice of using a pole is quite dangerous when there is moving shafting near the ceiling.

I have obviated the foregoing difficulties by locating across the framed opening 10, Fig. 1, the supporting elements 11, 11. These elements, which may be in the form of tightly stretched wires or cables or bars as illustrated, constitute tracks below which the shade 12 is located, hangers, as 13, attached to its splints or warp cords, running upon the tracks. These hangers are arranged in sets, each alined across the shade, the several sets being spaced to include a plurality of splints. The hangers 13 which I prefer are illustrated in Figs. 3 and 5, and comprise a stamping of fibre which bears a tongue portion 14 and two lugs 15, 15 extending laterally from the body portion 16. The length of the tongue 14 is just the distance between two of the warp cords in the splint shade, and since the lugs 15, 15 extend beyond this, they engage the warp cords 17 of the shade 12. The holes 19 are punched through the tongue and before the installation the supporting wires 11 are threaded through the holes.

I find fibre a particularly suitable substance from which to make the hangers. It slides easily along the supports. It does not chafe the cords, and the supports may be very easily installed in a standard shade by pushing the tongue 14 upwards between two of the splints 18. If the thickness of the fibre strip is properly chosen, there will be no tendency for the fibre to rotate when the shade is extended and the hangers will also hang

vertically no matter what angular position may be assumed by the splints of the shade.

As shown in Fig. 2, one batten 21 forming one end of the shade is held to one side of the sky light opening by suitable harness, in this case by the screw eyes 22 and links 23. The outer batten bears an eye or staple 24 to which the operating cords are attached. These pass over the pulleys or eyes 25 attached to the opposite wall of the sky light frame and back over the pulleys 26, 26 which change the direction of the hand loop 27 of the operating cord. When the cord in the loop 27 is pulled in the proper direction, the shade shown extended in Fig. 2 will be folded back, as indicated in Fig. 4, or pulled ahead with the outermost pleats extended, as illustrated in Fig. 1.

The hangers may be made in other forms and of other material than that shown. I have found the hanger illustrated in Fig. 6 satisfactory. It consists of a wire bearing a loop 28 and having hooked ends 29, 29. The distance between the bottom 31, 31 of the hooks is that which exists between the warp cords of the splint shade.

These hangers may be installed by folding the shade backwards, thrusting one of the hooks under the cords 17, bending the other end of the hook (which may be easily done, since the loop 28 unwinds until the opposite hook is hooked under the opposite warp cord 17) and then the hanger is released.

A further form of hanger is shown in Figs. 7, 8 and 9. This comprises the loop 32, twisted at right angles to the axis of the hanger and having end loops 33, 33 adapted to hook over the warp cords. With this form of hanger, the shade cannot be folded back as compactly as when the hanger allows the splints to fold back vertically.

The number of splints which will be in a pleat depends upon the amount of head room allowed. Ordinarily, I prefer that the hangers should be set every sixteen splints, which allows the shade to fold back with the pleat eight splints deep. Such depth ordinarily does not occupy much head room and allows the shade to be pulled along the supports with little effort.

As I have stated, I prefer that the support for the shade shall be a stretched wire or wire rope since this is the simplest form which makes both a satisfactory support and guide. It is obvious, however, that other forms of supports could be used, and I have utilized the term "wire", consequently, to indicate any supporting rod, bar, track, cable or cord which will support the splint shade substantially in accordance with the disclosure made herein.

What I claim, therefore, is:

1. A support for splint shades comprising a thin piece of material having a part adapted to be thrust through the slot between two

adjacent splints and adapted to engage a support, and also having portions thereon adapted to engage the warp cords of the shade and thereby support the shade.

2. Means for shading a sky light comprising a plurality of wires stretched across the skylight opening, a splint shade foldable in pleats and hung upon the wires, a plurality of hangers slidable upon the wires and extending through the shade between adjacent splints the length of the hangers being greater than the distance between the warp elements of the shade, and operating means for sliding the shade along the wires.

3. A hanger for a splint shade comprising a sheet of thin, stiff material having a blade portion adapted to extend between two adjacent splints, a hole in the blade through which a support may be threaded, and lug portions adapted to engage the warp cords of the shade.

4. In a splint shade, means for supporting the shade comprising a looped wire hanger having an eye adapted to be threaded by the shade support and bearing hooks adapted to engage the warp cords of the shade.

5. Means for shading a sky light, comprising a plurality of wire stretched across the skylight opening, a pleatable splint shade hung upon the wires by means of fibre hangers extending through the opening between the adjacent splints, a hole in the projecting portion of the hanger to engage the wires, lugs upon the hangers to engage the warp cords of the shade, and an operating device for sliding the shade along the wires.

6. Means for shading skylights of extended areas including a plurality of wires crossing the skylight opening, a shade formed of thin web strips bound together with cords forming the warp of the shade, a plurality of detachable hangers engaging the warp cords slidably mounted on said wires, and means for moving the shade along the wires in either direction for extending or retracting the same.

7. Means for shading a skylight comprising a plurality of supporting tracks extending across the skylight opening, a splint shade below the tracks, and hangers running on the tracks and engaging the warp cords of the shade at intervals of a plurality of splints.

8. Means for shading a skylight comprising a plurality of supporting tracks extending across the skylight opening, a splint shade below the tracks, and hangers running on the tracks and engaging the shade at intervals of a plurality of splints.

9. A hanger for splint shades comprising a looped wire having an eye for threaded engagement with a shade-supporting wire, and hooks for engaging a plurality of pairs of warp cords of the shade.

10. A hanger for splint shades comprising
a looped wire adapted to straddle a shade slat
and having an eye for threaded engagement
with a shade supporting wire, and having
5 hooks for engaging a pair of warp cords of
the shade.

In testimony whereof I affix my signature.

LE ROY J. STEFFEN.

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