No. 669,967. Patented Mar. 12, 1901.

S. B. SOLOMON.

WINDOW CURTAIN OR SHADE.

(Application filed Oct. 27, 1900.)

(No Model.)

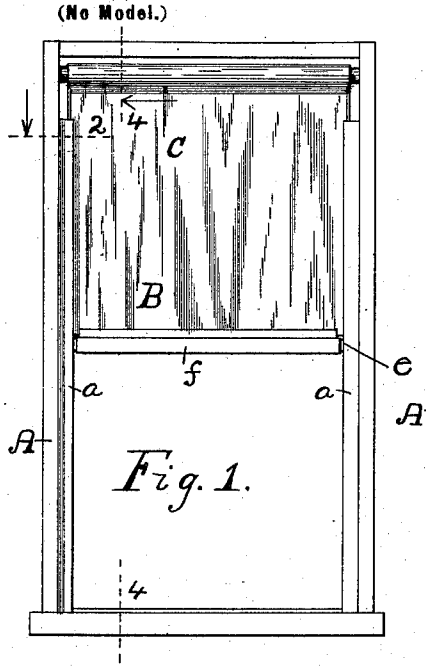


Fig. 1.

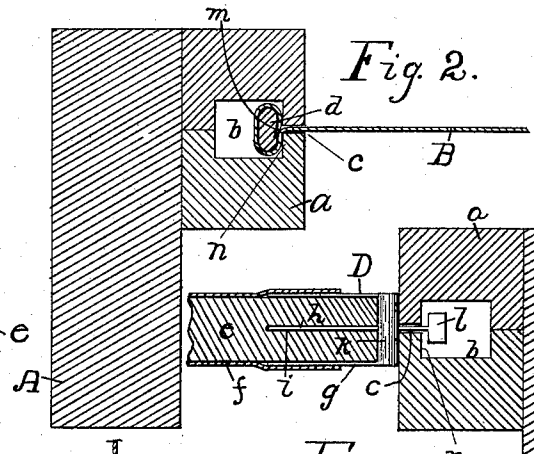


Fig. 2.

Fig. 3.

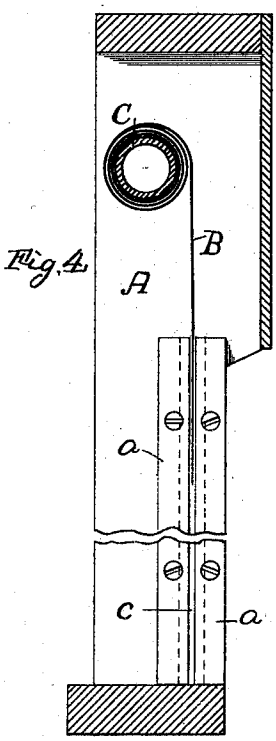


Fig. 4.

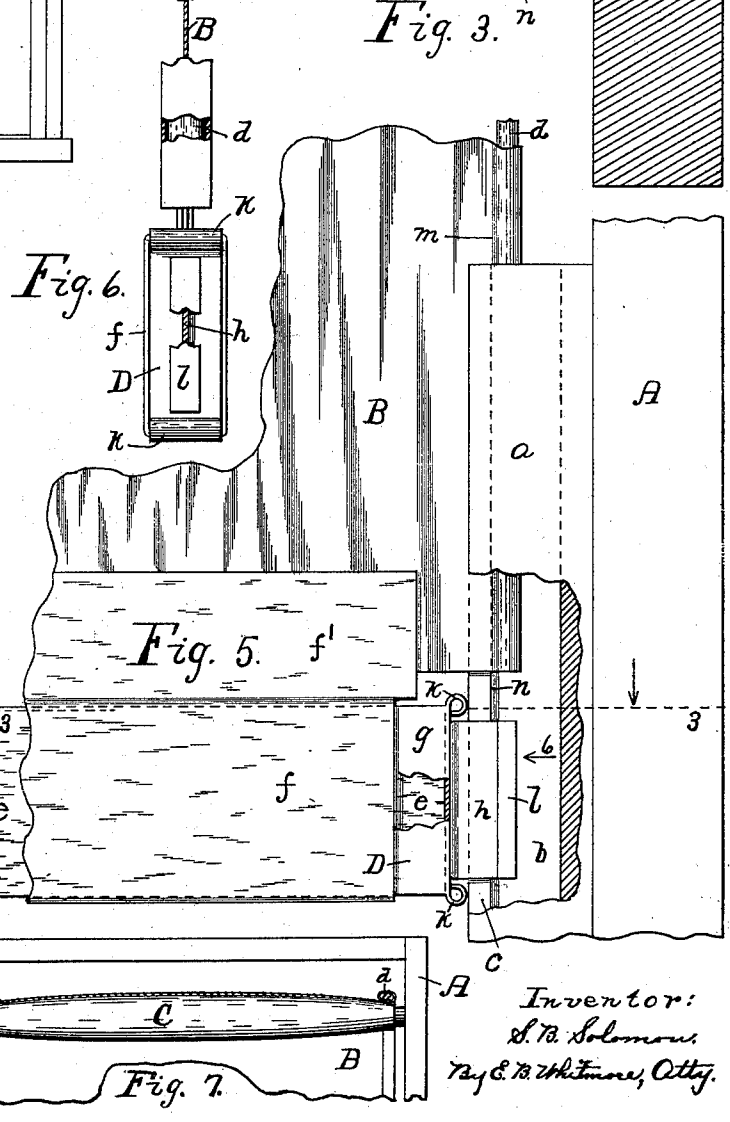


Fig. 6.

Fig. 5.

Fig. 7.

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UNITED STATES PATENT OFFICE.

SAUNDERS B. SOLOMON, OF ROCHESTER, NEW YORK.

WINDOW CURTAIN OR SHADE.

SPECIFICATION forming part of Letters Patent No. 669,967, dated March 12, 1901.

Application filed October 27, 1900. Serial No. 34,597. (No model.)

To all whom it may concern:

Be it known that I, SAUNDERS B. SOLOMON, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Window Curtains or Shades, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention is a curtain or shade for windows for shutting out sunlight and storms, adapted more particularly for the open windows of summer excursion cars, boats, &c., subjected more especially to the action of the elements, and also for railway-cars and vehicles generally.

The main object of the invention is to provide a shade or curtain for windows which, while it may be readily raised or lowered as necessity may require, will hold practically to its vertical place or position within the window-frame and not swing out therefrom and flaunt or undulate to the inconvenience of passengers.

Other objects and advantages of the invention will appear in the following specification, in which the invention is fully described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is an inside elevation of a window with my improved shade in place. Fig. 2 is a transverse section of parts at the left side of the window, taken on the dotted line 2 in Fig. 1. Fig. 3 is a similar section at the right side of the window, taken on the dotted line 3 3 in Fig. 5. Fig. 4 is a vertical section on the dotted line 4 4 in Fig. 1, parts being broken out. Fig. 5 is an inner front elevation of parts of the device, parts being broken out and vertically sectioned. Fig. 6 is an end elevation of the lower rail or foot-bar of the shade seen as indicated by arrow 6 in Fig. 5. Fig. 7 shows the form of the roller uncovered. Fig. 1 is drawn to a scale smaller and Figs. 2, 3, 5, 6, and 7 to scales larger than that of Fig. 4.

Referring to the parts shown, A is the frame of a window as ordinarily constructed, and B the shade proper, which may be a flexible sheet made of any material suitable for the purpose.

C is a spring-actuated roller, mainly of common kind, though in some cases enlarged at the middle, and supported at any convenient place within the frame of the window for winding upon it the shade B in the usual manner.

a a are vertical guides or strips secured to the respective inner vertical faces of the window-frame A, the guides being formed with longitudinal races *b b*, opening inwardly through slits *c* toward the respective edges of the shade B. The shade is thickened at its vertical sides, being provided thereat with flexible strips *d*, Figs. 2, 5, and 6, as of fibrous material or india-rubber, the edges of the shade being wrapped around the strips and seamed along a flat side of each, as shown. These strips give to the shade enlarged edges, which occupy the respective races *b b*, as shown in Figs. 2 and 5, the web of the shade occupying the respective slits *c c*. These enlarged edges prevent the shade from being forced out of the guides or out of place by the wind, said edges being prevented from drawing out through the narrow slits *c c*.

The shade B is provided at its lower end with a strip or foot-bar *e*, usually of wood, within a leather inclosure *f*, the bar being provided at its ends with metal terminals D, Figs. 3, 5, and 6. These terminals or end pieces are formed with side plates *g*, between which to receive the ends of the bar *e*, and with thin tongues *h*, projecting inwardly into kerfs *i* in the ends of the bar. The parts D are further formed with horizontal transverse beads or rolls *k k* at the upper and the lower edges, respectively, of the bar *e* in position to bear lightly against the inner faces of the guides *a a* to hold the lower end of the shade steadily in place when moved vertically in the guides. The tongues *h* project or extend outwardly through the respective slits *c* into the races *b b*, being provided at their extreme ends with enlarged parts *l*, occupying the respective races, as appears in Figs. 3 and 5. These parts *l*, acting with the bearing-rolls *k k*, aid to keep the foot-bar *e* horizontal and prevent either end from moving or turning upward or downward in advance of the other. The strips *d* at the sides of the shade are purposely made wide and flat, as shown in Fig. 2, and in wrapping the web of the shade around them it is so done that the vertical seams at *m m* of the web shall be at the middle line of a flat side of each strip. Thus constructed the pull upon the shade due to the

pressure of the wind at any time will be along the lines of the seams, which will cause the strips to present a flat side of each toward the adjacent slit *c* and against the inner shoulders *n n* of the guides *a a*, as shown in Fig. 2. Furthermore, the flexibility of the parts along the seams *m m* permits the strips *d d* to turn flatwise or with their longer diameters parallel with the plane of the shade when wound upon the roller to more readily adapt themselves to the roller, as shown in Fig. 7. I usually form the roller with a swell at the middle, as shown, to better adapt it for receiving the shade with its thick edges, and also extend the leather casing *f* of the bar *e* upward to form an inclosure or binding *f'* for the lower edge of the shade, as shown in Fig. 5.

What I claim as my invention is—

1. A window shade or curtain consisting of a flexible sheet or shade proper, and a roller therefor, with a swell between its ends, said sheet having thickened substantially flat edges, and guides to engage the edges of the sheet, the latter having a horizontal foot-bar to engage with and move along said guides, substantially as shown and described.

2. A window curtain or shade consisting of a flexible sheet or shade proper, and a roller therefor, said sheet having thickened substantially flat edges with their seams at substantially the middle line of said flat edges, and guides formed with vertical races, and slits opening out of said races, the thick edges of the shade occupying the races, and a foot-bar for the shade, having end pieces to occupy said slits, substantially as shown and described.

3. A curtain or shade for windows, having a flexible sheet or shade proper, and a roller for the shade, and guides at the sides to engage the shade, having races and narrow slits opening out toward the shade, and a foot-bar for the shade having end pieces formed with rolled or rounded parts to meet the guides, and extended parts to occupy the slits, substantially as shown and described.

4. A shade or curtain for windows, having a flexible sheet or shade proper formed with thickened edges, and guides formed with races and slits opening out therefrom, the thick edges of the shade occupying the races, with the shade occupying the slits, a foot-bar for the shade having end pieces formed with projecting parts to meet said guides, and extended parts to occupy the slits, said extended parts being formed with enlarged ends to occupy said races, substantially as and for the purpose specified.

5. A window shade or curtain having a flexible sheet or shade proper, and flat strips inclosed by the outer edges of said flexible sheet, the latter being seamed or joined at the middle line of a flat side of each strip, and guides to engage the sheet, the latter having a foot-bar at its lower end to move along said guides, and a roller for the sheet enlarged at its middle, substantially as and for the purpose specified.

In witness whereof I have hereunto set my hand, this 23d day of October, 1900, in the presence of two subscribing witnesses.

SAUNDERS B. SOLOMON.

Witnesses:
ENOS B. WHITMORE,
M. B. SMITH.