C. M. EVELETH.

SHADE ADJUSTER.

APPLICATION FILED MAR. 21, 1916.

1,249,936.

Patented Dec. 11, 1917.

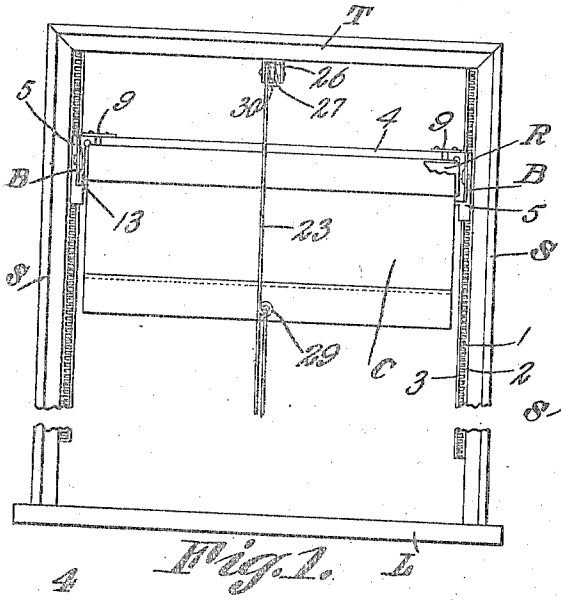


Fig. 1.

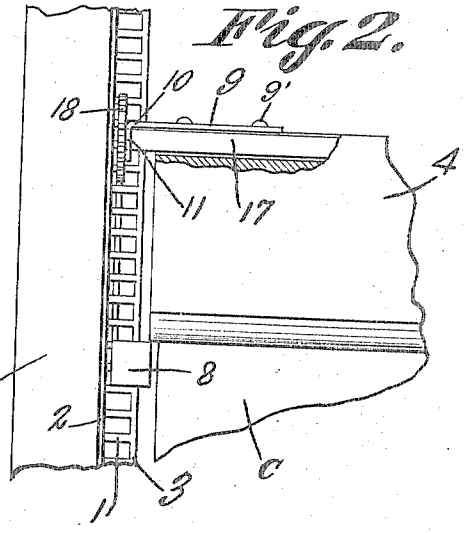


Fig. 2.

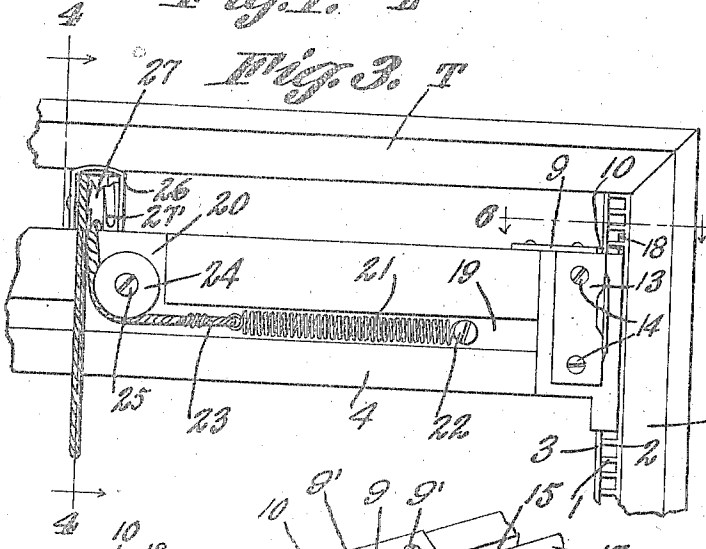


Fig. 3.

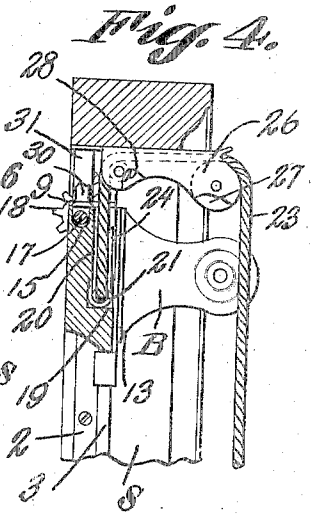


Fig. 4.

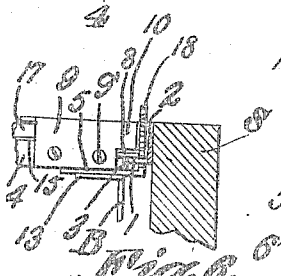


Fig. 6.

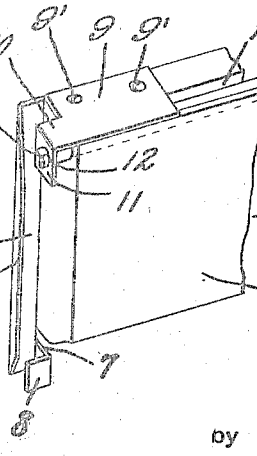


Fig. 5.

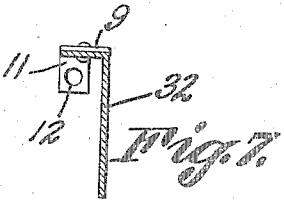


Fig. 7.

Witnesses

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UNITED STATES PATENT OFFICE.

CLARENCE M. EVELETH, OF RIVER FOREST, PROVISO, ILLINOIS.

SHADE-ADJUSTER.

1,249,936. Specification of Letters Patent. Patented Dec. 11, 1917.

Application filed March 21, 1916. Serial No. 85,667.

To all whom it may concern:

Be it known that I, CLARENCE M. EVELETH, a citizen of the United States, residing at River Forest, (town of) Proviso, in the county of Cook and State of Illinois, have invented a new and useful Shade-Adjuster, of which the following is a specification.

This invention relates to window shade adjusters, and more particularly to that type which permits the entire shade to be adjusted relative to the window frame.

An object of the present invention is to provide a shade adjuster so constructed that both ends of the curtain supporting means are uniformly moved relative to the window frame, thereby maintaining the supporting means in a horizontal position.

Another object of the present invention is to provide a shade adjuster embodying means for locking the curtain member in its uppermost position without permitting any downward movement of the said supporting means.

A further object of the invention is to provide a shade adjuster of generally improved construction, whereby the device will be convenient, practical, serviceable and efficient in its use.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

This invention has been illustrated in its preferred embodiments in the accompanying drawing, wherein—

Figure 1 is an elevation of a window frame showing the improved shade adjuster applied thereto.

Fig. 2 is a fragmental elevation of the opposed side of the frame, depicting the invention applied thereto.

Fig. 3 is an elevation of a portion of the curtain supporting bar and a portion of the window frame.

Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is a detail perspective view of the curtain supporting member.

Fig. 6 is a fragmental horizontal section taken on the line 6—6 of Fig. 3.

Fig. 7 is a transverse sectional view taken through a modified form of curtain support.

Referring more specifically to the drawings, S designates the stiles of a window frame, T the top rail and L the sill.

Secured to the inner or adjacent faces of the stiles, are rack members preferably formed of sheet metal. Each rack member is provided with an intermediate perforated plate 1, a longitudinally disposed securing flange 2 and a longitudinal guide flange 3.

In order to support the curtain C relative to the window frame, there is provided a curtain support or bar 4, having guide strips 5 secured at the opposite ends thereof. Each guide strip 5 has a guide flange 6 extending from the outer or free end thereof, while at the lower terminal of the guide strip 5 there is formed a perpendicular guide arm 7, and a guide finger 8 projects perpendicularly from the arm 7, said flange being arranged parallel with the strip 5.

Bearing plates 9 are secured to the top face of the bar 4, and at each end thereof, by screws or other securing elements 9′. These plates are reduced at their outer ends to provide guide lugs 10, and bearing flanges 11 extend perpendicularly and downwardly from the outer ends of the lugs 10. The flanges 11 are provided with apertures, the function of which will be hereinafter disclosed.

An ordinary curtain or shade C is carried by the usual spring roller R, that is supported by opposed brackets B, which have their securing flanges 13 secured to the supporting bar 4, by screws or other securing elements 14. The screws 14, also, extend through the strips 5, and thereby secure them to the bar 4.

A longitudinal groove 15 is formed in the upper face of the bar 4, for the reception of a shaft 17 that extends longitudinally of the bar 5 and beyond the opposed ends thereof, where the shaft 17 in turn projects through the apertures 12 formed in the bearing flanges 11. Pinions 18 are secured to the opposed terminals of the shaft 17, and they are adapted to mesh with the perforated plate 1, to thus insure the uniform movement of the opposed ends of the bar or curtain support 4.

It will be observed that the lower ends of the racks 1 terminate above the sill L, so that the bar 4 may be assembled relative to the said racks by moving the bar upwardly

from the lower ends of the racks 1. The pinions 18 are held in operative relation to the racks 1 by the guide strips 5, flanges 6, arms 7 and fingers 8, also, by the lugs 10 and bearing flanges 11.

A longitudinal groove 19 is formed in the front face of the bar 4 and a transverse groove 20 communicates with and extends from the longitudinal groove 19 to the upper edge of the bar 4. An extension helical spring 21 is received by the longitudinal groove 19 and the outer end of this spring is secured to the bar by a screw or other securing device 22. Secured to the opposed or inner terminal of the spring 21 is a flexible element or cord 23, that is trained around a pulley 24 which is pivotally secured to the bar 4 and within the groove 20 as indicated at 25. A suitable hanger 26 is secured to the rail T and is designed to pivotally support spaced pulleys 27 and 28. The pulley 27 has spiral or cam grooves 27′ formed in the flanges thereof, which are adapted to grip the cord 23 between the pulley 27 and a wall of the hanger 26, when the cord 23 has been moved into engagement with the said cam grooves. The cord 23 after passing around the pulley 24 is then trained over the pulleys 27 and 28, and then down to the lower terminal of the shade C, where it is suitably secured, as indicated at 29.

A stop member is provided by passing a screw 30 through a tube or spacing sleeve 31, and then screwing it into the lower face of the top rail T. The head of the screw 31 is secured in the path of travel of the bars 4 and, therefore, limits the upward movement of the said bar.

In practical operation, the entire shade may be elevated by simply exerting a downward pressure upon the cord 23, which will move over the pulleys 27 and 28 and consequently draw the curtain supporting bar 4 upwardly. After the shade has been adjusted to the desired position, it may be secured by simply moving the cord 23 to one side of the pulley 27, and then allowing a slight downward or retrograde movement of the bar 4, which will rotate the pulley 27 sufficient to cause the cam grooves 27′ to bind or grip the cord against the hangers 26. Now, the shade C may be withdrawn from the roller R or wound upon the roller at the will of the operator.

When it is desired to secure the curtain in its uppermost position, the bar 4 is elevated until it strikes the head of the screw 30, thus limiting the upward movement of the curtain supporting bar 4. However, the operator continues to pull on the outer portion of the cord until sufficient cord has been drawn over the pulleys 27 and 28 to place the spring 21 under tension, after which the cord is moved to one side of the pulley and released, thus allowing the spring to draw the cord back over the pulley 27 and bind it as above described.

It will be seen that this arrangement allows the curtain to be secured in its uppermost position, without permitting the usual retrograde movement of the curtain during the locking or binding of the curtain cord.

In the form of the invention shown in Fig. 7, an angle bar 32 is substituted in lieu of the bar 4, and it obviously performs the same functions.

Having thus described the invention, what is claimed as new is:

1. The combination with a frame having a curtain supporting bar slidable thereon, of an extension spring having one terminal secured to the said bar; a pulley rotatably secured to the curtain supporting bar; a cam pulley supported by the said frame; and a flexible member having one end secured to the free terminal of the spring, said flexible member being trained around the pulley which is secured to the curtain support and over the cam pulley.

2. A shade adjuster, comprising a frame, a curtain supporting bar sliding in the frame, a flexible member for sliding the bar, means for guiding and locking the flexible member, and resilient means for actuating the guiding means to lock the flexible member when the supporting rod is in its topmost position.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CLARENCE M. EVELETH.

Witnesses:

WALTER J. BETT,

EDW. L. SCHULTZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."