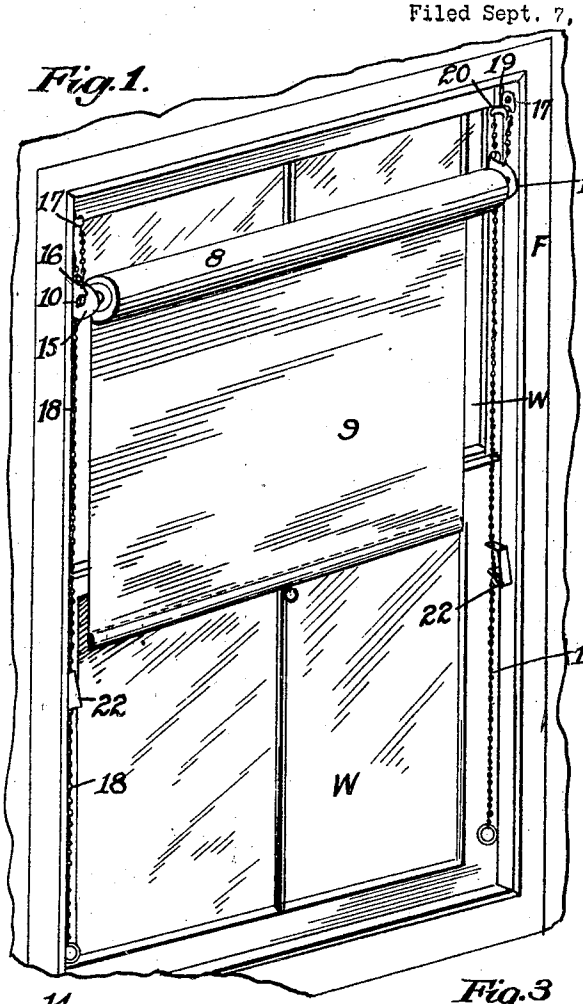
June 9, 1925. 1,541,261

T. F. HARRIS

ADJUSTABLE SHADE ROLLER SUPPORTING MEANS

Filed Sept. 7, 1923

Fig. 1.



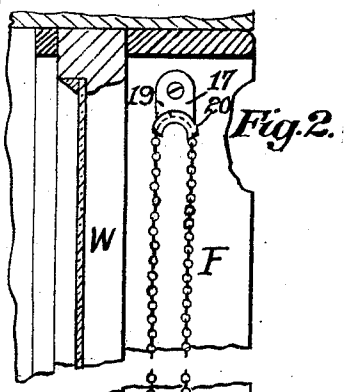


Fig. 2.

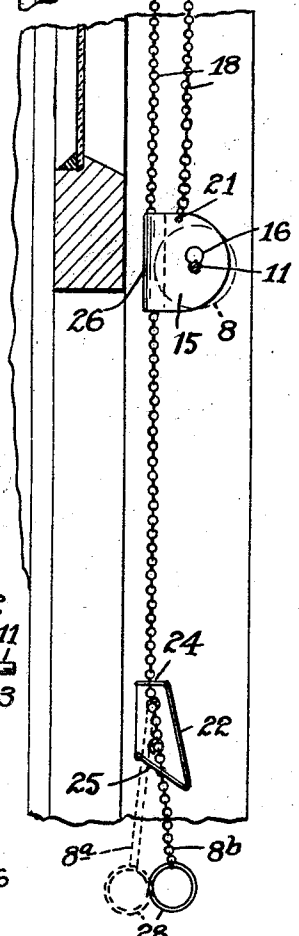


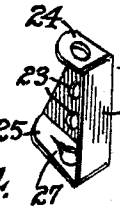
Fig. 3



Fig. 7.



Fig. 6.



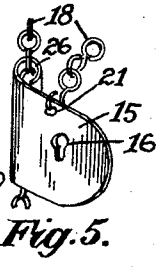
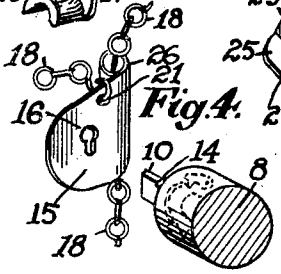


Fig. 5.

Fig. 4.



Inventor

Thomas F. Harris

By his Attorney John O. Seifert

Patented June 9, 1925.

1,541,261

UNITED STATES PATENT OFFICE.

THOMAS F. HARRIS, OF NEW YORK, N. Y.

ADJUSTABLE SHADE-ROLLER-SUPPORTING MEANS.

Application filed September 7, 1923. Serial No. 661,373.

To all whom it may concern:

Be it known that I, THOMAS F. HARRIS, a citizen of the United States, and a resident of the borough of Manhattan, in the city, county, and State of New York, have invented certain new and useful Improved Adjustable Shade-Roller-Supporting Means, of which the following is a specification.

This invention relates to adjustable supports for window shade rollers whereby the roller with the shade may be adjusted upward and downward in a window frame to position the shade or curtain at any desired predetermined distance from the top of the window frame to permit of light entering the window over the top of the shade, and to also facilitate ventilation without having the objectionable feature of the shade being blown by the air entering the window with the resultant flapping and annoying noises, and it is the object of the invention to provide an adjustable shade roller support which is novel, simple, cheap in structure, and which is easily and quickly operable to adjust the shade roller.

In carrying out the invention I provide a pair of chains which are movably engaged over a pair of hangers secured to a window frame adjacent the top thereof with one end of the chains connected to the plates and in perforations of which plates the shade roller trunnions are engaged, said trunnions and plate perforations being arranged to retain the plates against endwise displacement, and said plates also being arranged for the guiding of the chains, the shade also being releasably retained in adjusted position by brackets fixed to the window frame arranged with opposite perforated ears for the passage and guiding of the chains with the perforation in the one ear of the brackets being constructed and arranged as a claw for the engagement of a chain link, the weight of the chain roller retaining the chain link in operative relation with said retaining claw.

In the drawing accompanying and forming a part of this specification Figure 1 is a perspective view of a window frame with my improved adjustable shade roller supporting means mounted thereon and suspending a shade roller therefrom in one adjusted position in relation to the window.

Figure 2 is a cross sectional view on an enlarged scale of a portion of a window and window frame and showing my improved means for adjustably supporting the shade roller at one end.

Figure 3 is a front elevation of a shade roller showing the manner of arranging the roller supporting trunnions for use in connection with the present shade roller support.

Figure 4 is a perspective view of one of the shade roller supporting plates and showing the end of the shade roller arranged with the spring influenced trunnion in disassembled relation thereto.

Figure 5 is a view similar to Figure 4, but showing a portion of the opposite end of the shade roller arranged with the fixed trunnion in disassembled relation to the roller supporting plate.

Figure 6 is a perspective view of one of the brackets arranged for the co-operation of the shade roller supporting chain therewith to retain the shade roller in adjusted position; and

Figure 7 is a perspective view of one of the hangers over which the shade roller suspending chains movably engage.

Similar characters of reference designate like parts throughout the different views of the drawing.

In the embodiment of the invention shown in the drawing a roller 8 to which a shade or curtain 9 is attached and adapted to be wound onto and from the roller has the usual pawl and spring controlled or influenced trunnion 10 at one end and a fixed trunnion 11 at the opposite end, said trunnion 11 having a shoulder 12 to limit the insertion of the trunnion into the end of the roller which is usually made of wood. The trunnion 11 is arranged adjacent the shoulder 12 with an annular recess 13, and the trunnion 10 which is usually of rectangular shape in cross section is arranged with opposite recesses 14 for a purpose to be hereinafter described.

The opposite roller trunnions are mounted in brackets of like structure, comprising a plate 15 (Figures 2, 4 and 5) provided with a perforation 16 having two different cross sectional dimensions, or one part of reduced

cross sectional area as compared with the other part, as clearly shown in the drawing. By this arrangement the roller trunnions may be inserted in a longitudinal direction into the enlarged portion of the perforation with the reduced portion 13 of the trunnion 11 then engaged with the portion of reduced size causing the opposite walls of the portion of reduced width to engage in the annular recesses 13 and thereby preventing the plate from moving endwise from the trunnion while permitting of rotative movement of the trunnion in the plate perforation. The trunnion 10 due to the formation thereof as it engages in the portion of the plate perforation of reduced size is held against rotative movement and against longitudinal movement by the portion of the wall of the perforation engaging in a recess 14 thereof. A lateral marginal portion of the plates is formed to tubular shape, as shown at 26 (Figures 4 and 5) for a purpose to be hereinafter set forth.

The shade roller is adjustably suspended from hangers 17 secured to the side members of the frame F for the window W by chains or the like 18. The hangers are in the form of a sheet metal stamping (Figure 7) having a part arranged with a perforation for the engagement of means, such as a screw, for fastening to the window frame, and has a portion extending laterally from the said fastening member at substantially a right angle and of convex form in cross section, as shown at 19, over which the chains are engaged and have free sliding movement, said convex portion having a flange 20 at the outer end to prevent the chains from slipping off. The one end of the chains is secured to an eye 21 and pass through the tubular portion 26 of the shade roller supporting plates with the loop formed thereby engaged over the convex portion of the hangers. The chain attaching eye 21 is located adjacent the marginal portion of the plates which is adapted to be at the top when the plates are in shade roller supporting position and substantially intermediate the tubular portion 26 and perforation 16. By this arrangement the shade roller supporting plates with the roller mounted therein is maintained substantially in position with the tubular portion of the plates extending in a vertical direction with no tendency of the plates to cant and thereby permit of the free movement of the chains in the tubular portions 26 of the plates.

The shade roller is raised by exerting a pull upon the chains 18 and is lowered by the gravity or weight of the shade roller and releasing or paying out the chains and when the roller is adjusted by releasably securing the chains. For this purpose there is provided a pair of brackets (designated in a general way at 22) and consisting of a metal stamping arranged with perforations 23 for the engagement of means for fastening to the side members of the window frame, as shown in Figure 2. This stamping is formed with a pair of perforated ears 24, 25 at opposite ends (Figure 6) with the ear 25 extending diagonally or inclining to the ear 24 transversely of the bracket and arranged below said latter ear when secured to the window frame. The perforation in the ear 25 has a laterally extended reduced portion 27 forming a slot the opposite walls of which diverge toward the perforation and thereby arranging said ear as a claw. The chains are threaded through the perforations in the bracket ears 24, 25 the perforation in ear 24 serving as a guide for the chain. A direct upward pull on the chain roller supporting chains by the weight of the shade roller due to the inclination of the ear 25 relative to the ear 24 will cause a connecting portion of the links of the chains to be guided into the reduced portion or claw 27 of the ear 25 and become wedged therein, as shown in dotted lines 8^a in Figure 2, firmly and securely retaining the chains and thereby the chain roller in adjusted position. To release the chains the end of the chains extending below the brackets 26 is moved to the full line position 8^b in Figure 2 thereby pulling the chains out of the reduced portion 27 of the perforation in the bracket ear 25 when the chains will readily pass through the perforations in the ears.

By the arrangement of engaging the chains over the hangers 17 and the threading of the chains through the tubular portion 26 of the bracket plates in which the roller is mounted and through the perforations in the ears of brackets 22 the chains also serve as a guide for the shade roller support bracket plates and thereby prevent the shade roller swinging outward from and toward the window as by a current of air or otherwise. The chain may be provided with rings 28 to prevent them from passing through the ear perforations of brackets 22 and to facilitate the adjustment of the shade roller.

Having thus described my invention I claim:

In adjustable shade roller supporting means, the combination of a shade roller having fixed and spring influenced trunnions each of which trunnions is arranged with a transverse reduced portion; plates having perforations of two different cross sectional dimensions for the insertion of the roller trunnions and the engagement of the reduced portion thereof to hold the shade roller and plates against displacement and said plate having an edge formed to tubular shape; flexible means connected at one

end to said plates and the opposite ends passing through the tubular portion of the plates; brackets over which the intermediate looped portion of said flexible means movably engage and guides for the flexible means during the adjusting of the shade roller arranged with means for the engagement of said flexible means to retain the shade roller in adjusted postion.

Signed at the city of New York, in the county of New York and State of New York, this 1st day of September, 1923.

THOMAS F. HARRIS.