No. 674,331. Patented May 14, 1901.

C. W. BLACKSTONE.

SHADE ADJUSTMENT.

(Application filed Aug. 25, 1900.)

(No Model.)

Fig. 1.

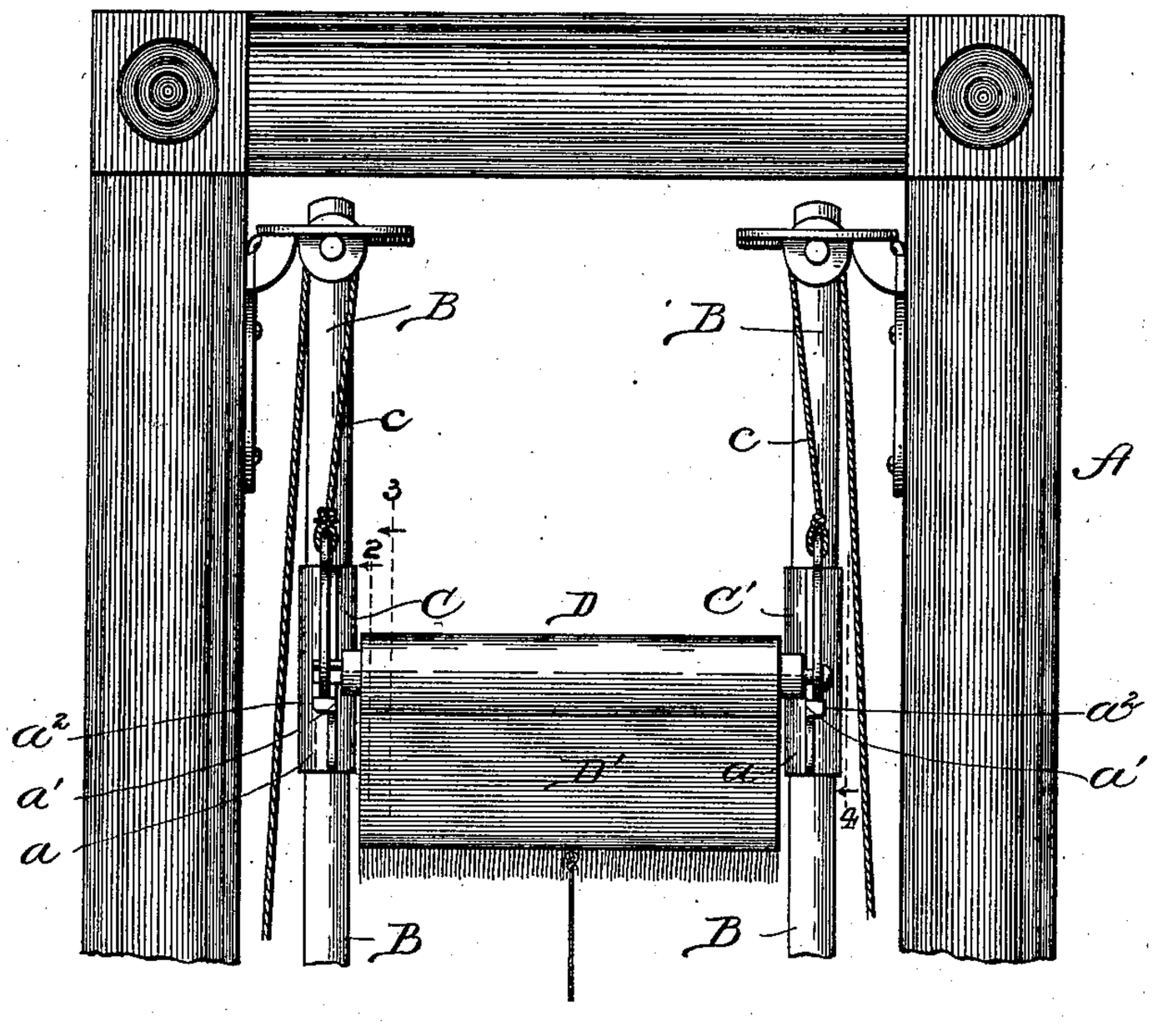


Fig. 2.

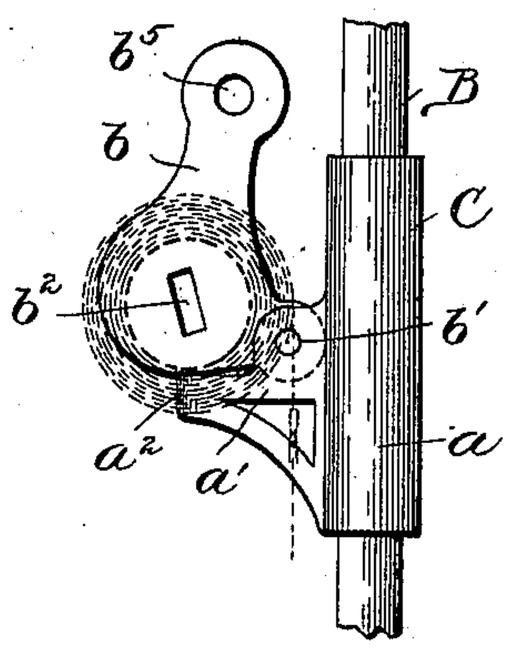


Fig. 3.

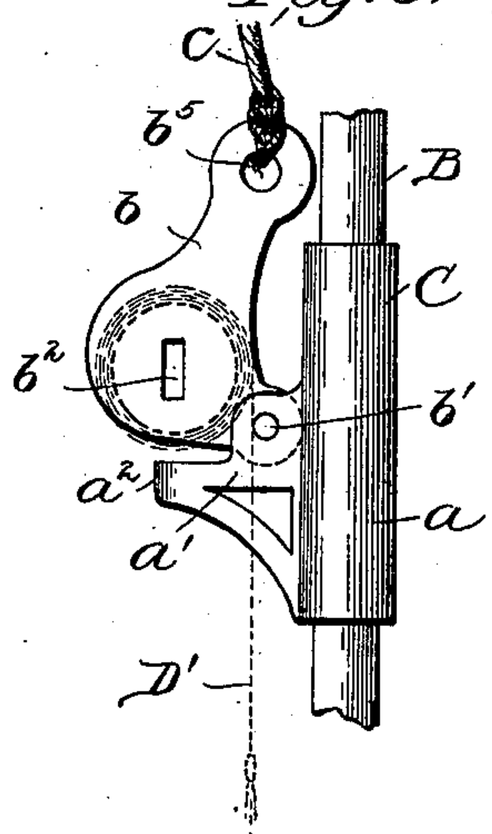
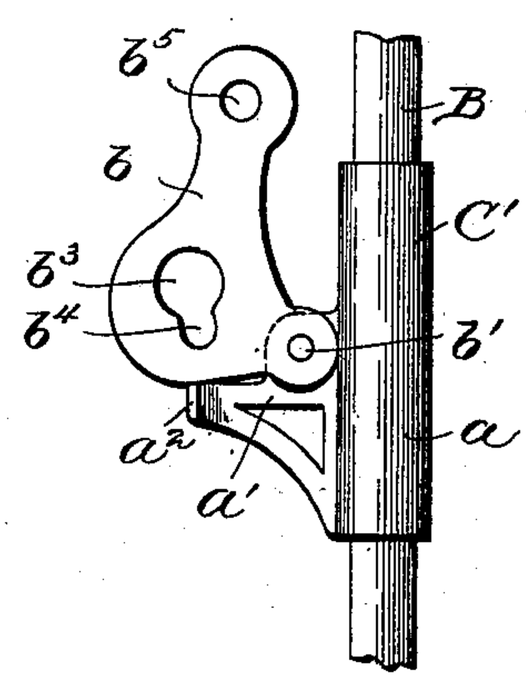


Fig. 4.



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UNITED STATES PATENT OFFICE.

CLARENCE W. BLACKSTONE, OF ELGIN, ILLINOIS, ASSIGNOR TO FRED H. KNAPP, OF AURORA, ILLINOIS.

SHADE ADJUSTMENT.

SPECIFICATION forming part of Letters Patent No. 674,331, dated May 14, 1901.

Application filed August 25, 1900. Serial No. 27,982. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE W. BLACKSTONE, a citizen of the United States, residing at Elgin, in the county of Kane and State of Illinois, have invented a new and useful Improvement in Shade Adjustments, of which the following is a specification.

My invention relates particularly to that class of window-shades having vertically-adjustable shade-rollers; and my primary object is to provide improved means for suspending said rollers on the vertical guide-rods commonly employed. Heretofore roller-brackets slidably connected with the guide-rods have been employed, and these have received directly the ends or studs of the shade-roller. As will be readily understood, however, upon reflection, the weight of the roller and curtain produces a turning moment upon the brackets, causing a tendeney to bind, thereby interfering with the free dropping of the roller. Moreover, the tangential force, due to the weight of the binding-strip at the lower margin of the curtain and to the weight of any unrolled or drawn portion of the curtain, produces a turning moment upon that bracket which receives the angular or spring end of the roller. In the operation of raising the roller through the medium of its brackets a turning moment, resulting in binding, is produced. Thus there is in the common construction an inherent tendency for the brackets to bind regardless of the direction in which they are moved. This tendency is hardly noticeable when the rods are smooth and bright; but in practice the rods after a few weeks' use, or perhaps disuse, become more or less corroded and the inherent defect noted at once seriously affects the operation of the device.

My invention overcomes the defect and objections noted and provides a roller-bracket which, as experiment has demonstrated, will slide readily upon badly-corroded or resined rods, a severer test than will be met with in actual use.

In the accompanying drawings, which illustrate my invention in its preferred form, Figure 1 represents a portion of a window equipped with guide-rods and supplied with my improved shade-roller brackets; Fig. 2, an inner face view of one of the roller-brackets employed, showing one position of a pivoted roller-receiving link or member; Fig. 3, a similar view showing another position of said pivoted member, and Fig. 4 an outer face view of the other roller-bracket employed.

A represents the window-casing; B, suitably-supported guide-rods; C C′, the shade-roller brackets; D, the shade-roller, and D′ the shade or curtain.

Each bracket comprises in the preferred form a vertical tubular slide a for receiving the guide-rod, a forwardly-extending lug a' on said slide and bearing a stop a^2, and a movable link or member b, pivotally connected to the lug a' at a point b'. By preference the member b of the bracket C is supplied with an angular perforation b^2, and the same member of the bracket C′ is supplied with a circular perforation b^3, having at its lower side an offset or recess b^4. Each bracket is provided with a cord-receiving perforation b^5. The perforation b^2 receives the angular end of the shaft or stud connected with the roller-spring, and the perforation b^3 receives a large-headed pivotal screw at the adjacent end of the roller, as will be readily understood from analogous use in well-known constructions. The stops prevent the links from dropping to such a degree as to allow the pivotal screw to become disengaged from its link.

In Fig. 2 the position of the shade-roller is indicated in dotted lines, the shade being supposed to be practically all rolled up. Here the weight of the roll is assumed to predominate and the member b rests upon the stop a^2.

In Fig. 3 the curtain is assumed to be drawn till its weight is sufficient to lift, or rather turn, the member b upwardly from its stop. This tendency to turn is resisted by the weight of the roller. Moreover, in the particular construction shown the perforation b^5 is located so close to the rod as to cause the suspending-cord (represented by c) to assume an angle, as exaggeratedly represented in Fig. 3, whereby the pull upon the cord also tends to rotate the member b toward its rest. The suspending-cords pass over pulleys at the upper ends of the guide-rods in a well-understood manner.

At the bracket C′ there is no angular con-

nection and no tendency for the member *b* to turn.

The point of pivotal attachment between the member *b* and the slide which is supported through the medium thereof is as close to the gravity-center of the slide as practicable, though, as experiment has demonstrated, there is little tendency to bind even when the point of pivotal attachment is considerably removed from said center.

Broadly considered, the shade and its roller constitute a weight supported by the links *b*, and the links likewise support the slides. The invention is not limited to use in the particular connection shown, and no limitation is to be understood from the foregoing detailed description except as shall appear from the appended claims.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character described, the combination of suspended weight-supporting links, slides independently supported through the medium of said links and capable of free movement with relation to said links, and suitably-supported guides receiving said slides, substantially as and for the purpose set forth.

2. In a device of the character described, the combination of suspended weight-supporting links, slides pivotally connected to and independently supported through the medium of said links and having free movement with relation thereto, and suitably-supported guides receiving said slides, substantially as and for the purpose set forth.

3. In a shade adjustment, the combination of suitably-supported vertical guide-rods, links suspended adjacent thereto and provided with means for receiving the ends of a shade-roller, a shade supported by said links, and slides on said guides and supported by and having relative motion with relation to said links, substantially as described.

4. In a shade adjustment, the combination of suitably-supported vertical guide-rods, links suspended adjacent thereto and provided with means for receiving the ends of a shade-roller, a shade supported by said links, slides on said guides and supported by and having relative motion with relation to said links, and stops for limiting the downward rotation of said links relatively to said slides, substantially as described.

5. In a shade adjustment, the combination of suitably-supported guide-rods, links suspended adjacent thereto, one of said links being provided with an angular perforation, a shade-roller supported by said links and having its spring-held stud in engagement with said angular perforation, slides on said guides and having pivotal connection with said links, and stops for limiting the relative motion between the links and slides in one direction, substantially as described.

6. In a shade adjustment, the combination of vertical guide-rods, tubular slides thereon provided with lugs, suspended links pivotally connected to said lugs and supporting said slides, and a shade-roller supported by said links, substantially as described.

7. In a shade adjustment, the combination of vertical guides, slides thereon, links pivoted to said slides and provided with means for suspension located practically vertically above said pivotal connections, and a shade-roller supported by said links, substantially as described.

CLARENCE W. BLACKSTONE.

In presence of—
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