

(No Model.)

J. C. PERKINS.
WINDOW SHADE FIXTURE.

No. 479,766.

Patented July 26, 1892.

Fig. 1.

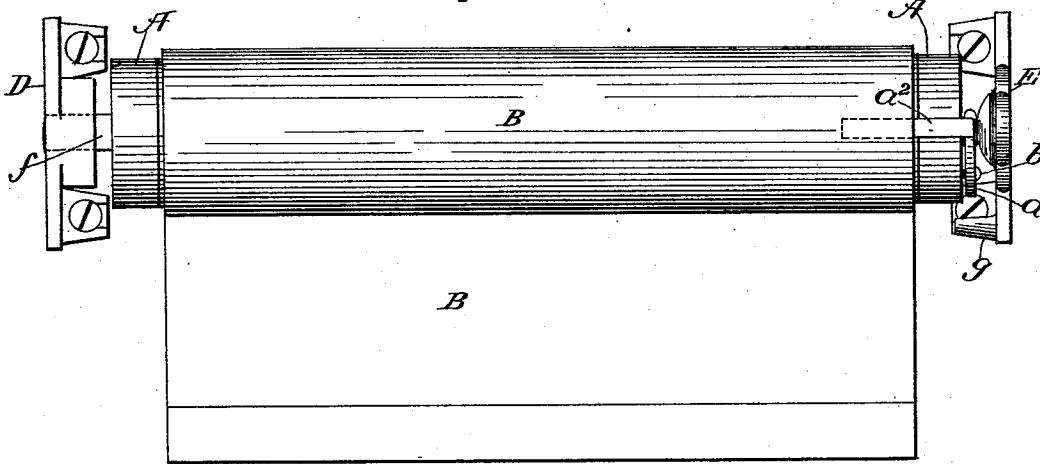


Fig. 2.

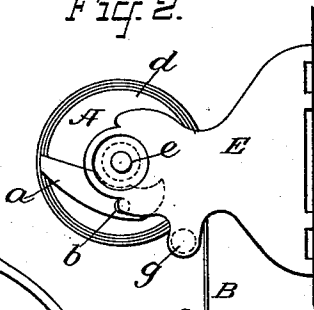


Fig. 3.

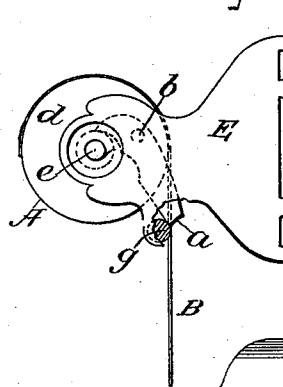


Fig. 5.

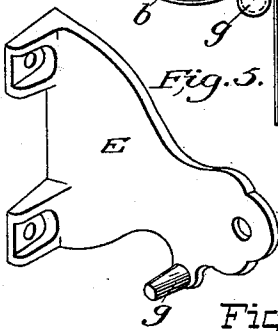


Fig. 4.

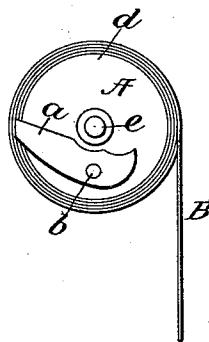
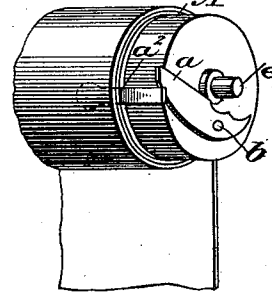


Fig. 6.



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JUDSON C. PERKINS, OF MERIDEN, CONNECTICUT, ASSIGNOR TO THE
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WINDOW-SHADE FIXTURE.

SPECIFICATION forming part of Letters Patent No. 470,766, dated July 26, 1892.

Application filed January 31, 1891. Serial No. 379,760. (No model.)

To all whom it may concern:

Be it known that I, JUDSON C. PERKINS, of Meriden, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Window-Shade Fixtures; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

In the use of window-shades that are mounted so as to be rolled upon and uncoiled from the usual spring-roller there is always more or less liability in drawing the shade clear down of pulling the shade off of the roller or of partially detaching its upper end therefrom, and to avoid or overcome this serious difficulty various means have heretofore been suggested or devised, none of which, however, appear to have perfectly answered the desired ends.

To provide for use a shade fixture or contrivance by which this liability of detachment of the shade from the roller when suddenly pulling the shade down too far may be avoided, while at the same time the shade-fixture shall be simple and economic of manufacture and perfectly adapted to the purposes designed, is the object of my invention, which to this end and object consists in the novel combination of devices or mechanisms, which will be found hereinafter more fully described, and which combination will be more particularly pointed out, and clearly defined in the claim of this specification.

To enable those skilled in the art to which my invention relates to understand and practice the same, I will now proceed to more fully explain it, referring by letters to the accompanying drawings, which form part of this specification, and in which I have shown my said invention carried out in some of the forms in which the device or mechanism embodying my improvement may be made.

In Figure 1 I have shown in a face view or elevation a window-shade and shade-fixture made and operating according to my invention. Fig. 2 is an end view of the same, showing the shade almost entirely rolled up. Fig. 3 is a similar view showing the shade

pulled down to the lowest point to which it is permitted to be uncoiled by the roller-locking devices or mechanism. Fig. 4 is an end view of the roller and its permanent attachments, together with the shade wound thereon, removed from the roller-supporting brackets. Fig. 5 is a perspective view, looking at the inner side, of that one of the brackets which is of a slightly-different construction from any heretofore used to adapt it to the purposes of my improved shade-fixture. Fig. 6 is a perspective view showing a modification in which a different form of roller-locking mechanism is employed having the finger or device controlled by the shade fastened to one edge thereof.

In the several figures the same parts will be found designated by the same reference-letters.

At Figs. 1 to 5, inclusive, A is a spring shade-roller of a usual approved form, but having applied to one of its ends a pawl or pivoted arm *a*, necessary to effectuate in one form my invention.

B is an ordinary window-shade, the upper end or edge of which is in the case shown tacked to the wooden roller A in the usual manner.

The spring-roller A is mounted in a pair of metallic brackets in the usual manner, one of which D, in which is journaled the polygonal or squared protruding end *f* of the spring-spindle of the roller, is made about as usual, but the other of which E, in which is supported in the ordinary way the cylindrical or round teat *e*, that projects from one end of roller A, is formed or provided with an inwardly-projecting stud *g*, which coacts, in a manner to be presently described, with one end of the pawl *a*. The pawl *a* is pivotally attached at *b* to the end of the roller, (or its metallic cap or end plate *d*,) and in the case shown is shaped and proportioned so that it is adapted to come to a bearing at or near one end of the roller axis or teat *e* and at or near the other end on the stop or lug-like projection *g* of the bracket E, all in a manner and for a purpose to be presently described. The outer end of the pawl *a* is preferably provided with a thin extension *a*², which lies

at right angles to the plane of the pawl proper, and extends thence in a direction or line parallel with the axis of the roller. This extension or finger a^2 of the pawl a is adapted to be encompassed by the shade as the latter is rolled upon the roller, as and for a purpose to be presently explained.

Before describing the modification shown at Fig. 6, I will explain the operation of the device or fixture illustrated in the first five figures, which is about as follows: Supposing the shade to be rolled up, as seen, for instance, at Fig. 2, in pulling it down it unwinds in the usual manner, and all the parts of the whole fixture operate in the ordinary way (the additional devices of the pawl, with its finger or extension and the stop g of bracket D , remaining dormant) until the shade shall have been drawn down to near the position at which the locking mechanism shall have been set to stop its further descent. Then when the shade shall have been pulled down until, say, only two or three coils of it are left on the roller A the further unwinding causes the finger a^2 (which had been up to this time bound up within the coils of the shade, as seen at Fig. 2) to be liberated and the pawl a will be forced to turn on its pivot at b by the action on the finger a^2 of that portion of the shade which is passing off tangentially from the periphery of the roller, and will be thus forced to assume the changed position (relatively to the roller end) seen at Fig. 3, in which position its outer end (and a portion of finger a^2) will, as shown, come into contact with the stop g , and as any further pivotal action of pawl a is then prevented by reason of its inner end or portion abutting against the teat or journal e of the roller it follows that any further pull downward on the shade necessarily brings the roller into a deadlock with the bracket-stop and the devices located intermediately of it and the roller A .

Whenever it may be desired to roll up the shade, the latter is simply manipulated in the usual manner of working spring-roller shades when no impediment to the rewinding of the shade into the condition seen at Fig. 2 will be offered, because when the roller shall have nearly completed its first revolution in the winding-up operation the finger a^2 and outer end of pawl a will by the gravity of these parts swing into a position such that they will clear the stop g and such that the finger a^2 will lie close to the last-wound coil of the shade and be folded in against the already-wound-up coils, and will be overlapped by the ascending shade, and thus securely bound to the roller by the successive coils of the latter. Thus it will be seen that while the shade is free to wind entirely or partially up at all times without interference and to be pulled down to a point predetermined by the manner in which the pawl a with its finger a^2 may have been applied relatively to the coils wound on the roller underneath the finger a^2 , it never can be

unwound beyond said point, and as no sudden or unusually severe pull or jerk on the shade can exert any serious tendency to detach its upper end from the roller so long as two or three coils (more or less) of the shade remain on the roller, it follows that by the means shown and described I am enabled to wholly obviate any liability of the shade being pulled off the roller.

In practice the means shown and described may be employed under such conditions—*i. e.*, with the finger a^2 so adjusted relatively to the number of coils remaining on the roller when the finger is released to effectuate the deadlock between the roller and bracket-stop—that my invention may be used for regulating the descent half-way (more or less) of one or more shades for the immediate purpose of an adjustment of the shade or shades to some precise position or conditions with relation to the window. Of course the size and shape, as well as the precise arrangement of the pawl, finger, and bracket-stop, may be varied without changing the principle of construction or novel mode of operation of the means shown for limiting the rotation of the roller through the influence of the shade itself.

At Fig. 6 is shown a modification in which the roller end or cap is provided with a pawl like that seen at a in the preceding figures, but without the extension a^2 , there being, however, a finger-piece a^2 , that is fastened to the shade and that travels with it. In this modification when the shade is pulled down to nearly the predetermined point said finger (which had up to this time been bound down by the coils of the shade and had held the pawl a in a state of disuse) moves out of contact with the end of said pawl and leaves it free to gravitate into contact with the stop g and lock the roller. When the shade is almost entirely rolled up, the finger will come against the free end of the pawl, "pick it up," so to speak, and hold it in disuse until the shade be again pulled down.

Other modifications than those shown may be made in my invention and the contrivance in one or another form may be varied should occasion require it, so that the roller-locking mechanism will be thrown into and out of action at a set or predetermined point in the ascent of the shade instead of during its descent, the pith of my invention resting in the idea of a roller-locking mechanism that is under the influence of the shade or that is brought into and thrown out of an operative condition by the shade.

What I broadly claim, therefore, as of my invention, and desire to secure by Letters Patent, is—

In a window-shade fixture, the combination of the following-named instrumentalities, viz: a shade-roller suitably mounted, a shade attached to and adapted to be wound upon and unwound from said roller, a roller-lock-

It is hereby certified that in Letters Patent No. 479,766, granted July 26, 1892, upon the application of Judson C. Perkins, of Meriden, Connecticut, for an improvement in "Window-Shade Fixtures," errors appear in the printed specification requiring correction, as follows: On page 1, in line 12, the word "upon" should read *up on*; in line 45 the word "In," commencing the paragraph, should read *At*; in line 64 the word *and* should be inserted after the word "employed"; on page 2, line 131, the word "upon" should read *up on*; and on page 3, in line 4, a *comma* should be substituted for the "dash" after the word "part"; in line 5 the "dash" after the word "frame" should be stricken out, and a *comma* inserted after the word "thereon" in same line; and that said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 20th day of September, A. D. 1892.

[SEAL.]

CYRUS BUSSEY,
Assistant Secretary of the Interior.

Countersigned:

W. E. SIMONDS,
Commissioner of Patents.