(No Model.)

H. W. SIMMS.

SHADE ROLLER FIXTURE.

No. 469,032. Patented Feb. 16, 1892.

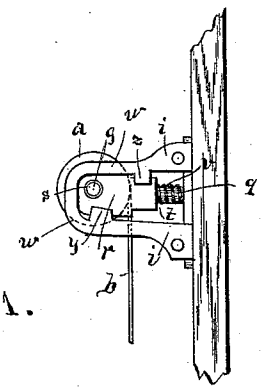


Fig. 1.

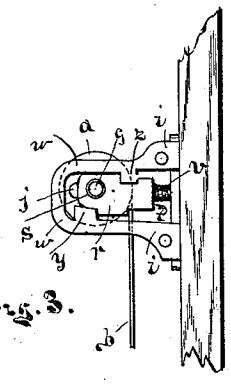


Fig. 3.

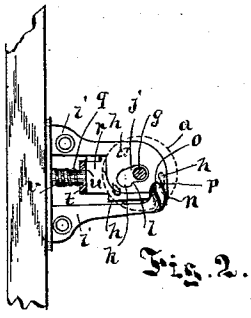


Fig. 2.

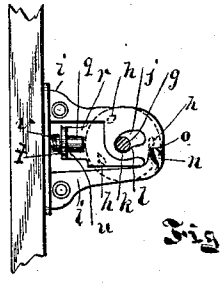
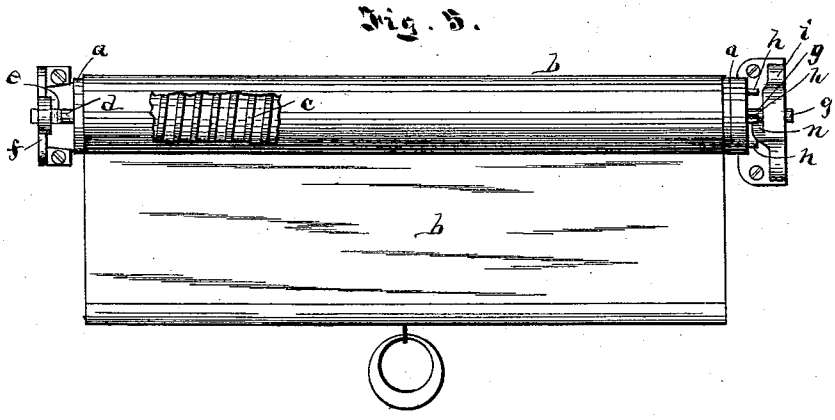


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY W. SIMMS, OF BAY CITY, MICHIGAN.

SHADE-ROLLER FIXTURE.

SPECIFICATION forming part of Letters Patent No. 469,032, dated February 16, 1892.

Application filed May 1, 1891. Serial No. 391,216. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. SIMMS, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Shade-Roller Fixtures, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in that class of window-shade fixtures in which an actuating-spring is the means whereby the roller is operated for winding the shade thereon; and the invention pertains particularly to the mechanism for operating the roller and for locking and retaining the same in any desired position.

My invention consists in the combination, arrangement, and construction of the parts, together with the operation of the same, as I shall hereinafter explain in detail, and which will be specifically pointed out in the claims of this specification.

The object of the invention is to provide devices whereby a shade-roller and its locking devices may be operated by manipulating the shade so that the shade may be retained in the position it occupies when released by the operator.

Another object of the invention is to provide devices for locking and retaining the roller in position which, on a downward pull upon the shade, will release the locking devices and allow the shade to be manipulated for raising or lowering, but which on the release of the shade will instantly engage and retain the shade in that position, whereby liability of the roller being accidentally operated to wind up the shade above the reach of the operator is avoided.

Another object is to provide devices for holding and locking a shade-roller in position which will be cheaply constructed, efficient and durable in its operation, and which can be arranged for shipment with all of its parts in position without liability of loss or disarrangement.

In the accompanying drawings my improved device is shown with the same letters of reference indicating the same parts throughout the several views.

Figure 1 is a side view in elevation of my improved device, with the parts in position for retaining the roller against revolution. Fig. 2 is a view of the inner side of the bracket of the same, with sections of the roller-journal. Fig. 3 is the same as Fig. 1, with the parts in position when the roller is locked. Fig. 4 is the same, with the roller unlocked. Fig. 5 is a front view in elevation and partly sectional of a shade-roller, with its supporting brackets embodying my invention.

a represents a shade-roller, and *b* is the shade, the roller being caused to revolve for winding the shade thereon by an inclosed actuating-spring *c* after the usual manner of shade-fixtures of this class, the spring being coiled around a shaft *d*, the end *e* of which projects beyond the end of the roller and engages with a supporting-bracket *f*, secured to the window-casing, the engagement being effected in such a manner that the shaft will be retained against revolution as the shade-roller revolves in the usual manner. The opposite end of the roller is provided with a roller-journal *g*, projecting from its center, and *h* are lugs projecting from the end of the roller between its periphery and the journal *g*, and *i* is a supporting-bracket secured to the window-casing, and its outwardly-projecting portion is provided with a slot *j*, arranged with its outer end to lie in a horizontal position, while its inner end is provided with a downwardly-curved recess *k*, forming a shoulder *l* on the front side thereof, and within this slot is placed the journal *g* for sustaining the end of the roller.

Upon the outer end of the bracket and projecting inwardly is arranged a lug *n* for engaging with either of the lugs *h* of the roller when the journal is in position in the front portion of the slot *j*, the upper portion *o* of the lug *n* being brought to an acute angle, while the forward portions *p* of the lugs *n* are also brought to an acute angle, so that an easy engagement of the lugs with each other is effected. The central part of the rear portion of the bracket is cut out, and *q* is a centrally-located stud or pin projecting forwardly toward the slot from the base of the bracket, and *r* is a reciprocating plate arranged with its inner face resting against the outer face of the projecting end of the bracket, and this plate is provided with an opening *s* for the

outer end of the journal *g*, while the rear portion *t* of the plate is turned to a right angle inwardly and provided with an opening *u*, passed over the stud *q*, and *v* is a spring coiled around the stud in rear of the portion *t*, and is arranged to actuate the plate outwardly, which also carries the journal *g* to the forward end of the slot *j*. Upon the outer side of the bracket and above and below the plate *r* is arranged a projecting rim *w*, and *y* is a lug projecting from the lower portion of the rim *w* and reaching over the lower edge of the forward portion of the plate, while *z* is a lug projecting from the upper portion of the rim *w* and reaching over the upper edge portion of the plate in rear of the lug *y*, so that the plate is retained thereby in position and permitted to move freely to and fro when the roller-journal is in position in the opening, and which also allows the plate when the roller-journal is removed to be pushed back, so that the outer end will clear the lug *y*. The plate is then tilted so that its lower edge moves forwardly outside of the lug *y* until the portion *t* is free from the stud *q*, which frees the plate for removal, the reverse movement placing the plate again in position.

The required turns are given to the shaft *d* to place a proper tension in the spring. The journal *g* is then placed in the slot *j* and opening *s*, and the end *e*, projecting from the opposite end of the roller, is engaged with the bracket *f*, the shade having first been wound upon the roller so as to depend from the rear or inner side of its periphery, and the shade is then drawn downward, which revolves the upper side of the periphery rearward and brings the rear side of the lug *h* into engagement with the rear under side of the lug *n* and moves this end of the roller, together with the plate *r*, to the rear until the journal drops into the recess *k* behind the shoulder *l*, where it remains so long as a continual downward pull is exerted upon the shade, the tension of the actuating-spring being such as to revolve the roller for winding up the shade against a pull upon the shade of sufficient force to retain the journal behind the shoulder, so that while the journal is behind the shoulder the shade may be manipulated as desired; but on the entire release of the shade or on a sudden upward movement of the hand of the operator the spring *v* at once actuates the plate *r* forward, and with it the end of the roller, and the actuating-spring, then moving the upper periphery of the roller forward, brings one of the lugs *h* into full engagement with the lug *n*, which firmly locks the roller against further revolution and retains the shade in position.

It will be noticed that directly on the release of the shade the locking device engages and prevents any further revolution of the shade, so that all liability of the roller "running away" and winding the entire shade thereon when released from a downward pull is obviated, while at the same time the shade can be manipulated for the proper adjustment thereof in an easy and expeditious manner.

The construction of the bracket *i* with the plate *r* for manipulating the roller-journal provides a free and easy movement thereof, which allows a spring of light tension to be used for actuating the roller forwardly and provides a construction which prevents any binding and sticking of the parts and insures a complete and reliable locking action when the shade is released, and at the same the bracket, with all of its parts ready to receive the roller-journal, can be shipped without liability of the spring being lost or the parts disconnected, so that a novice can put the parts in position upon a window as well as an expert.

Of course the construction of the actuating-spring and its attachments is not essential, as any desired form for supporting this end of the roller and for actuating the same may be used with my improved form of locking devices; and

What I claim as my invention is—

1. In a shade-roller fixture, the combination of a shade-roller having an actuating-spring and provided on one end with a roller journal and with lugs projecting from the end between the said journal and the periphery of the roller, a supporting-bracket provided with a horizontal slot having, as described, a depression and shoulder upon the lower side of its rear end portion, a plate mounted for moving to and fro upon the side of the bracket and provided with an opening for engaging with the end of the said roller-journal, and a spring for actuating the said plate forwardly, for the purpose set forth, substantially as described.

2. The combination, with a shade-roller provided with an actuating-spring and with a journal *g* and lugs *h* projecting from one end, the supporting-bracket *i*, provided with the slot *j*, having the depression *k* and shoulder *l* on its rear portion for carrying the journal, the lug *n*, projecting inwardly from the bracket for engaging the lugs *h*, of the plate *r*, provided with an opening for the roller-journal and with its rear portion *t* turned inwardly and provided with an opening *u*, a stud *q*, projecting from the rear portion of the bracket into the opening *u*, and a spring *v* around the said stud and bearing against the said part *t*, substantially as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

HENRY W. SIMMS.

Witnesses:
GEO. P. THOMAS,
JUSTIN POND.