T. BARRETT.

Spring Curtain-Roller.

No. 220,786. Patented Oct. 21, 1879.

*Fig. 1.*

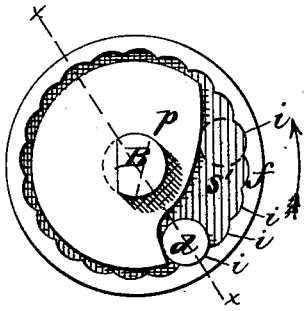
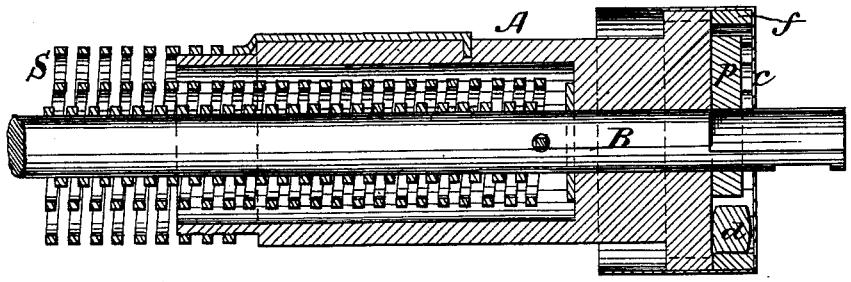



*Fig. 2.*




*Witnesses.*

Geo. W. Pierce.

E. B. Fairchild

*Inventor.*

Thomas Barrett

by

Wright & Brown

Attys

# UNITED STATES PATENT OFFICE.

THOMAS BARRETT, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO AMERICAN SHADE ROLLER COMPANY, OF SAME PLACE.

## IMPROVEMENT IN SPRING CURTAIN-ROLLERS.

Specification forming part of Letters Patent No. **220,786**, dated October 21, 1879; application filed June 25, 1879.

*To all whom it may concern:*

Be it known that I, THOMAS BARRETT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Spring Curtain-Rollers, of which the following is a specification.

This invention belongs to that class of rollers for curtains, maps, and other like suspended articles in which the roller is provided at one end with a non-rotating spindle supported in a bracket, and with a spring connected to the roller and spindle and adapted to wind up the curtain.

The invention relates to that class of spring curtain-rollers which are provided with means whereby the roller may be automatically locked whenever the curtain is released, thereby preventing the violent rolling up of the curtain by the spring, and requiring the upward movement of the curtain to be at a moderate rate.

The invention consists in the means hereinafter described for locking the roller when the curtain is released.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents an end view of a curtain-roller embodying my invention, the end cap or cover being removed. Fig. 2 represents a section on line *x x*, Fig. 1, showing the end cap in place.

Similar letters of reference indicate like parts in all the figures.

In the drawings, A represents a spring curtain-roller of ordinary general construction, and B represents the non-rotating spindle, which is supported in a suitable bracket and supports one end of the roller, the other end of the roller being supported in another bracket. The spring S of the roller is secured to the roller and spindle in the usual way, and rotates the roller in the direction indicated by the arrow in Fig. 1.

In carrying out my invention I rigidly secure to the end of the roller a metallic flange, *f*, which projects beyond the end of the roller and incloses an annular space around the spindle. Within this space and upon the spindle I place a metallic plate, *p*, which is fixed upon the spindle so that it will not rotate. The plate is detachable from the spindle, being provided with an irregular-shaped socket which incloses a correspondingly-shaped portion of the spindle, so that the plate is prevented from rotating when in place, and may be readily removed from the spindle.

One side of the plate *p* is recessed to form a substantially vertical space, *s'*, between the recessed side of the plate and the proximate inner surface of the flange *f*. Said space is practically of uniform width from its lower end half-way, or more, to its upper end, and is contracted gradually at its upper end, as shown in Fig. 1.

In the space *s'*, I place a loose disk, *d*, so that its periphery is in rolling contact with the inner surface of the flange *f*. The diameter of said disk is somewhat less than the width of the lower portion of the space *s'*, but is greater than the width of the space near the point where the latter commences to contract, so that when the disk is in the upper portion of the space it will be wedged between the proximate surfaces of the plate and flange.

The lower portion of the recess in the flange is curved abruptly, so that it is about at a right angle with the inner surface of the flange at the nearest point to said lower end, so that the disk cannot become wedged between the plate and flange at the lower end of the space.

The inner surface of the flange is corrugated, the corrugations being preferably a series of concave depressions, *i*, each of which is adapted to fit the periphery of the disk, and is of sufficient depth to form a slight seat for the disk.

*c* represents a cap which is placed on the end of the roller, and covers the flange *f*, plate *p*, and space *s'*, as shown in Fig. 2.

The operation is as follows: When the roller is rotated rapidly, as when the curtain is released while in upward motion, the disk *d* is carried upwardly by centrifugal force until it is wedged in the contracted upper end of the space *s'*, and thus caused to lock the roller. Hence the releasing of the curtain by the operator is sure to produce the locking of the roller and the stoppage of the curtain; but when the roller is rotated at a more moderate rate the centrifugal action is not sufficient to raise the disk to the contracted portion of the space.

It will be seen, therefore, that to raise the curtain its movement must be retarded and made comparatively slow by the operator. As the disk cannot become wedged in the lower end of the space *s'*, it will not prevent the reverse motion of the roller caused by pulling down the curtain. The corrugations assist in raising the disk when the roller rotates rapidly, and therefore render the locking more positive and rapid.

The means described for carrying out my invention are extremely simple and inexpensive, and are not liable to get out of order.

Having every reason to believe that I am not the initial inventor of the locking device composed of the flange, the fixed plate, the tapering recess, and loose disk, I hereby disclaim those features in their broad application.

What I do claim is—

In a spring curtain-roller, the flange *f*, provided with the corrugations *i i* and attached to the roller, the fixed plate *p*, attached to the non-rotating spindle and cut away to form the recess *s'*, and the loose disk *d*, all combined and operating substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS BARRETT.

Witnesses:

C. F. BROWN,

JAMES BARRETT.