S. S. PUTNAM.

Spring-Curtain Fixture.

No. 220,987. Patented Oct. 28, 1879.

Fig 1.

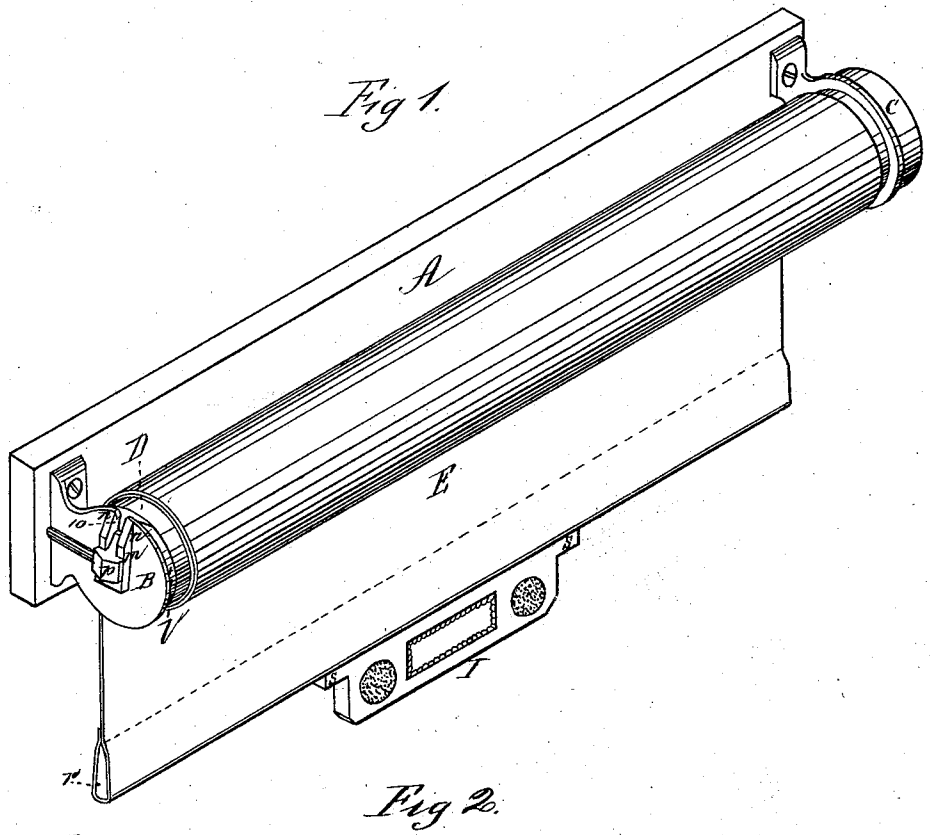


Fig 2.

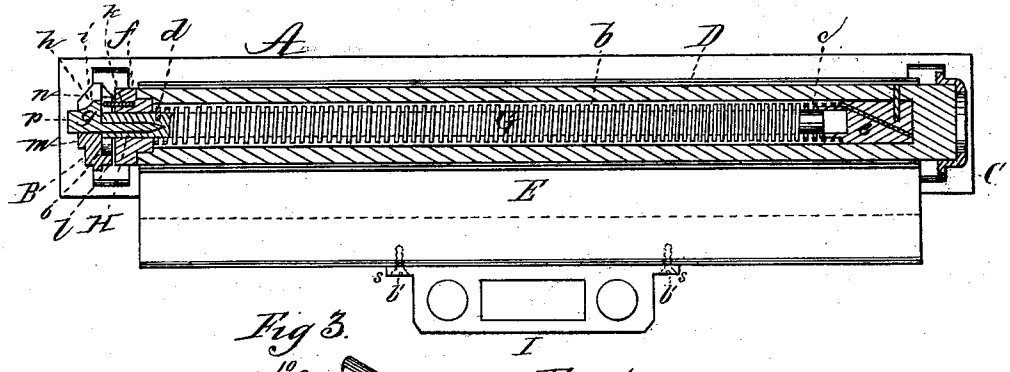


Fig 3.

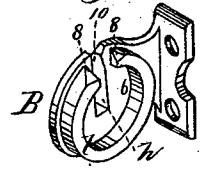


Fig 4.

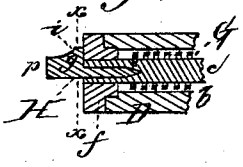


Fig 5.



Witnesses.

W. J. Lambridge

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UNITED STATES PATENT OFFICE.

SILAS S. PUTNAM, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENT, TO ANN M. PUTNAM, OF SAME PLACE.

IMPROVEMENT IN SPRING CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **220,987**, dated October 28, 1879; application filed July 24, 1879.

To all whom it may concern:

Be it known that I, SILAS S. PUTNAM, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Spring-Balance Curtain-Fixtures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a curtain-fixture constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section through the same. Fig. 3 is a perspective view of one of the brackets. Fig. 4 is a vertical section through one end of the roll. Fig. 5 is a section on the line *x x* of Fig. 4.

My present invention relates to certain improvements in spring-balance curtain-fixtures; and it consists in a simple automatic device for preventing the spring inclosed within the curtain-roll from unwinding when the roll is removed from its brackets, which device also creates sufficient friction between one end of the roll and the bracket contiguous thereto to assist in balancing the curtain and prevent its "creeping up" when drawn entirely down or nearly so.

My invention also consists in the combination, with the curtain, of a weighted metallic attachment, which is made ornamental, and serves the double purpose of a handle by which to draw down the curtain and also to properly balance it in any position.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents the top of a window-frame, to which are secured the brackets B C, which support the wooden roll D, to which the shade or curtain E is attached. This roll D is bored out longitudinally in the usual manner to form the chamber *b* for containing a coiled spring, G, which is supported on a long wooden spindle, *c*, to which one end of the spring is secured at *d*, the opposite end of the spring being attached to a cylindrical plug, *e*, which is fastened immovably within the roll D.

The end of the spindle *c*, to which the spring G is attached, passes through the cap *f* at the end of the roll D, and has driven into it a pin, H, which is provided outside the end of the spindle with an enlarged flattened portion, *g*, which fits into the slot *h* in the bracket B, which thus prevents it from being revolved with the roll D, so that as the curtain is drawn down the spring is wound up in the usual manner sufficiently to raise the curtain entirely up as required, the spring G having been wound up by turning the spindle as usual a sufficient number of times to produce the necessary force previous to placing the roll in the brackets, and when thus wound up it is prevented from unwinding by means of a lip or projection, *i*, on the flattened portion of the pin H, which is intercepted by and bears against a stop or pin, *k*, projecting from the end of the cap *f* of the roll D, the pin H, with the spindle *c*, being drawn out slightly in the direction of its length against the resistance of the spring G, so as to allow the lip to clear the pin *k* when the spring G is to be wound up by the hand, and when the pin H is released, after being turned a sufficient number of times, the retractive force of the spring G in the direction of its length will instantly draw in the pin H, so as to bring the lip *i* against the end of the cap *f*, when it will be in a position to strike the pin *k*, by which it is locked, and the further unwinding of the spring prevented.

On the inner side of the bracket B is formed a flange, *l*, against which the end of the cap *f* bears, this flange forming a recess or cavity, 6, within which the pin *k* revolves, and which is thus kept clear of the slot *h*, which it would enter if it were not for the flange *l*.

The upper ends of the flange *l* are beveled off at 8 to facilitate the entrance of the roll D, and the slot *h*, which is slightly inclined to the vertical, is provided with a projection, 10, near its top, which prevents the pin H from being thrown out by the action of the spring G.

On the outside of the bracket B, around the slot *h*, is a flange, *m*, the upper ends of which are beveled or chamfered off, forming inclines *n*, and when the flattened portion *g* of the pin H is being entered within the slot *h* of the bracket B, the inner side of a head, *p*, on the end of the pin H comes into contact with

these inclines *n*, which thus serve to draw out the spindle *c* in the direction of its length against the resistance of the spring G sufficiently to clear the lip *i* from the pin *k*, when the roll is free to be revolved in either direction, as is necessary, when in place within the brackets. When, however, the roll is to be removed from the brackets, the instant the pin H is lifted up out of the slot *h* it is drawn in by the action of the spring G, bringing the lip *i* against the cap *f* in a position to come into contact with the pin *k*, which thus locks the spindle and prevents the unwinding of the spring.

When the roll D is in place within the brackets B C, with the spindle *c* drawn out longitudinally against the resistance of the spring G, as described, it will be seen that the retractive force of this spring will cause the end of the cap *f* to bear constantly against the flange *l*, the friction thus created assisting in balancing the curtain and preventing it from "creeping up" when drawn entirely down or nearly so.

Where a metallic spindle, *c*, is employed instead of a wooden one, as shown, the pin H, with its flattened portion *g* and head *p*, would be formed in the same piece with the spindle instead of separate, as shown.

The above-described device is simple, cheap, effective, and not liable to get out of order, and as it is automatic and perfectly reliable in its action, all liability of the unwinding of the spring is avoided and much annoyance and trouble thereby avoided.

To the bottom of the curtain, which has inclosed within its hem, as usual, a flattened wooden bar, *r*, is secured a metallic handle or attachment, I, which may be of any ornamental design, and is preferably polished, plated, or bronzed, to give it a finished appearance, this handle being provided with projections *s*, through which pass the screws *b'*, by which the handle is secured in place.

The handle I is employed instead of the ordinary weighted tassel, and serves not only as a means for drawing down the curtain by the hand but to properly balance the curtain, and also as an ornamental appendage, while it is more convenient than an ordinary tassel, as it is always close up to the bottom of the curtain and does not swing or vibrate from side to side, as is the case with a tassel suspended by a cord. Furthermore, the ornamental handle prevents soiling the curtain, as has heretofore been the case, when taken hold of by the hand.

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

1. In a spring-balance curtain-fixture, the combination, with the roll D and its stop-pin or projection *k*, of the spindle *c*, having a lip or projection, *i*, and adapted to be drawn out in the direction of its length against the resistance of the spring G when the roll is placed within the brackets, so as to release the roll and allow of its being rotated in either direction and instantly retracted by the spring when the roll is lifted out of the brackets to lock the spindle and prevent the unwinding of the spring, substantially as set forth.

2. The combination of the roll D and its stop-pin or projection *k*, the spindle *c*, adapted to be drawn out in the direction of its length against the resistance of its spring G, and provided with a pin, H, having a flattened portion, *g*, a lip or projection, *i*, and a head, *p*, and the slotted bracket B, having inclines *n* on the outer side and a recess or cavity on the inner side, all constructed to co-operate in such a manner that on the removal of the roll from the brackets the spindle will be automatically locked and the unwinding of the spring prevented, substantially as described.

3. The combination of the bracket B, with its flange *l*, and the roll D, with its spindle *c* and pin H, adapted to be drawn together by the action of the spring G in such a manner as to produce constant friction between the end of the roll and the bracket to assist in balancing the curtain and prevent it from creeping up when drawn down, substantially as described.

4. The combination, with the curtain E and roll D, of the ornamental plate or bar I, which is connected with the bottom of the curtain and serves the double purpose of a handle and a balance-weight, substantially as set forth.

Witness my hand this 21st day of July, A. D. 1879.

SILAS S. PUTNAM.

In presence of—

W. J. CAMBRIDGE,

CHAS. E. GRIFFIN.