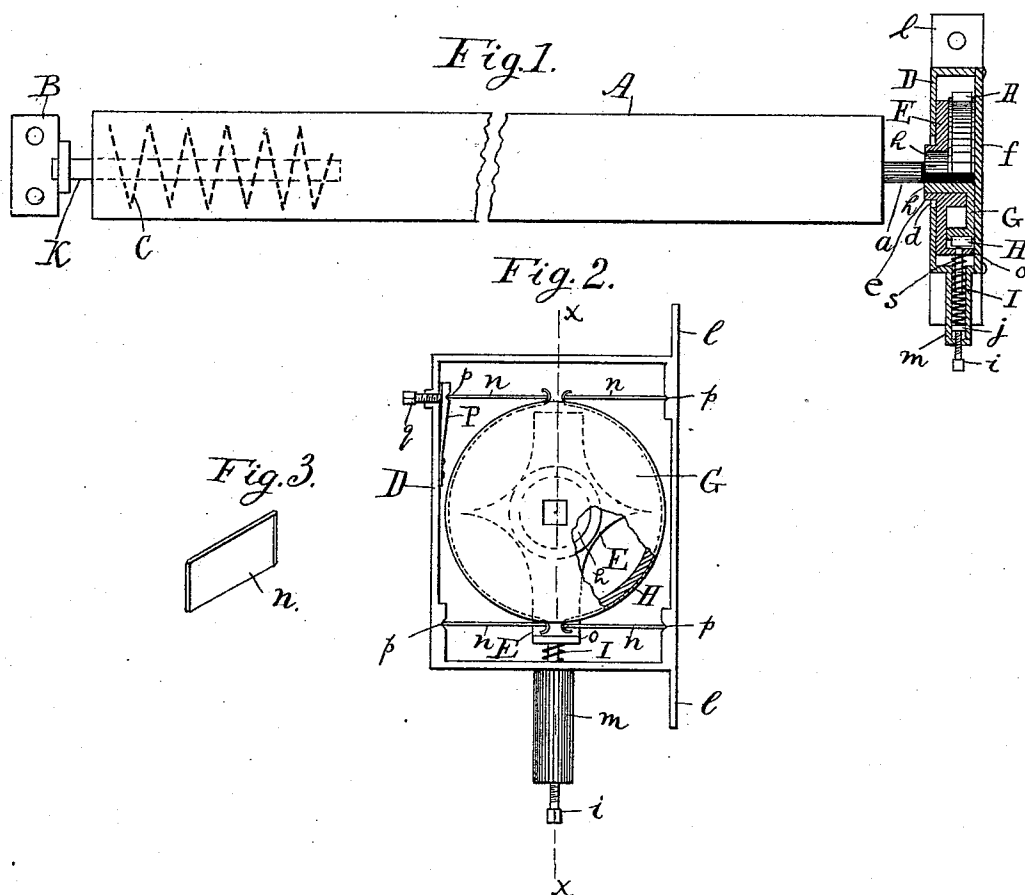


(No Model.)

J. A. LIDBACK.
CURTAIN HOLDING DEVICE.

No. 538,196.

Patented Apr. 23, 1895.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN A. LIDBACK, OF PORTLAND, MAINE, ASSIGNOR TO EDWARD T. BURROWES, OF SAME PLACE.

CURTAIN-HOLDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 538,196, dated April 23, 1895.

Application filed July 21, 1894. Serial No. 518,223. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. LIDBACK, a citizen of the United States, and a resident of Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Curtain-Holding Devices; and I hereby declare the following to be a full, clear, and exact description of the said invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a device for holding curtains firmly in position when they are at rest, and releasing them when it is desired to move them up or down, and it is designed to be applied to one end of the spring curtain roller, and to act as a support to the same.

In my present invention as herein shown and described, I make use of a friction wheel journaled in a vertically movable slide, these parts being in a suitable casing adapted to be secured to the window casing. The friction wheel contains a socket for receiving the end of the roller spindle, and a rim brake is provided with means for forcing the same into engagement with the edge of the friction wheel when the wheel and slide are in their middle position, and releasing it when they are above or below the middle position. A spring is provided for raising the slide and the friction wheel, and its tension is so adjusted that it will lift the end of the roller and connecting parts when the weighted curtain stick is raised, but when the weight of the curtain stick is applied to the roller, the spring is sufficient to lift the slide and the friction wheel substantially to their middle position. Thus when the curtain hangs in its normal position, the brake is in engagement with the friction wheel, and the roller is held against the force of its spring; but when the weighted curtain stick is lifted or pulled sharply downward, the friction wheel is relieved from the action of its brake, and allowed to turn freely.

In the accompanying drawings, I have illustrated a curtain holding device or fixture, constructed according to my invention, and showing the form in which I prefer to make it. In the drawings, Figure 1 represents the front view of an ordinary spring curtain

roller, with my holding device applied at one end to form a support for the roller spindle, the holding device being shown in section as taken on the line *xx* of Fig. 2. Fig. 2 is a back or end view of the holding device, taken at right angles to that of Fig. 1, with the back plates removed; and Fig. 3 is a detail of one of the toggles.

A represents the spring curtain roller, C being the spring and K being the rotatable spindle with its bracket B, and *a* being the fixed spindle on the opposite end, the spindle *a* having a square cross section where it enters the bracket as I prefer to make it. The portion of the spindle *a* shown in black in Fig. 1 is in section and is the square portion.

D represents a casing for holding the parts of the device, and is provided with ears or lugs *l*, by which it is fastened to the wall or to the window casing. Within this casing D there is a vertically moving slide E, having as here shown, a lug *e*, which projects through an opening *d* formed in the side of the casing next to the end of the roller. This slide E has a vertical motion, which is limited by the edge of the opening *d*.

A spring is provided for lifting the slide E against the weight of the roller and of the curtain contained thereon. As here shown I make use of the spiral spring I contained in a tubular projection *m* on the lower side of the casing, the upper end of the spring I bearing against the projecting flange *o* on the lower end of the slide E, and there is a rod *s* secured to the said flange, and projecting down within said tubular projection *m*. The lower end of the spring rests against a diaphragm *j* and its tension is adjusted by means of a screw bolt *i* by which the diaphragm *j* may be raised or lowered. The friction wheel G is journaled in the slide E by means of a hub *h* which extends as here shown through a central opening in the slide E and through the opening *d*. The friction wheel G thus has a vertical motion within the vertically movable slide E, and the hub *h* is provided with a central socket or opening, adapted to receive the square end of the spindle *a*, so that the friction wheel G is so connected that it rotates with the turning of the spring roller.

I provide a brake for checking the rotation of the friction wheel G and of the roller, so controlled that it will be in engagement with the wheel when the latter is at its vertically central position, and will be released when above or below that position. As the means for accomplishing this end, I prefer to groove the rim of the wheel G, applying thereon a friction band or brake H, one on each side, extending nearly but not quite one-half around the rim of said wheel. To the ends of these friction bands I pivot toggles *n*, the outer ends of the toggles being pivoted to the sides of the casing. As a simple means of pivoting these toggles, I turn back the ends of the friction bands to form recesses, and against these the inner ends of the toggles rest, while their outer ends are supported or stepped in V shaped grooves *p* formed in the sides of the casing. The turned up ends of the friction bands thus form short springs, which aid in properly applying the friction to the rim of the wheel. The lengths of these toggles *n* are so adjusted that when the friction wheel and the slide E are in their vertically central position, the toggles will be in a substantially right angle position to the sides of the casing, and the friction band will be in engagement with the rim of the wheel; but when the wheel is lifted above or drawn below its central position, the toggles will release the ends of the friction bands. By having a pair of toggles, as shown and described, above and below the wheel, it is necessary to have no other vertical guides for the slide E, so that the latter moves up and down with very little friction, as is necessary to the successful working of the device. One of the toggles *n* rests against a spring bearing P which is secured to the inner side of the casing, and this bearing is moved in or out by means of a screw bolt *q*, passing through the side of the casing. Thus when the ends of the toggles *n* begin to wear, or any looseness occurs, the bearing P may be forced inward so that the toggles may be adjusted to work perfectly together. The tension of the spring I is such that it will lift the weight of the roller and curtain and their connecting parts, and force the slide and the friction wheel to their upper position when the weighted curtain stick is lifted; but when this curtain stick is allowed to hang freely, the spring I allows the slide and the friction wheel to fall to their central position, or preferably a trifle above that point.

Having thus described the construction of my curtain holding device, its operation becomes evident. When the curtain with its weighted curtain stick is hanging normally, the slide and friction wheel are drawn down to their central position, with the toggles in their bearing in position to put the friction bands in engagement with the friction wheel. When in this position the curtain will be tightly held by the friction wheel, and it will not be dislodged from its position by any jar-

ring, jolting, or by any ordinary motion. If it is desired to raise the window, the weighted curtain stick is simply lifted, taking its weight from the roller and from the supporting spring I, and the slide E and the friction wheel G are forced into their upward position, thus releasing the brake and allowing the roller spring C to turn the roller and wind up the curtain. When the weighted curtain stick is released from the hand and allowed to hang, the curtain is again locked. If it is desired to lower the curtain, the curtain or curtain stick is simply pulled downward by a sharp pull, which draws the slide and the friction wheel below their central position, releasing the toggles and allowing the friction wheel and the roller to turn freely. It is obvious that in place of a friction band as here shown in two parts, the band may be constructed to extend entirely around the edge of the wheel, the two adjacent ends being operated by toggles either on the upper or lower side of the wheel; but as before stated, I prefer to make the band in two parts and use two sets of toggles, with the double purpose of operating the friction band and guiding the movement of the slide and wheel. The plate *f* is secured to the back side of the casing to protect the parts.

I claim—

1. The herein described curtain holding device, consisting of a casing, a slide mounted therein and having a limited vertical motion, a friction wheel journaled in said slide and containing a socket for the reception of the roller spindle, a brake for acting on said friction wheel and means for setting said brake when said slide is in its middle position, substantially as described.

2. The herein described curtain holding device, consisting of a casing, a slide mounted therein and having a limited vertical motion, a spring for lifting said slide, a friction wheel journaled in said slide and containing a socket for the reception of the roller spindle, a brake for acting on said friction wheel and means for setting said brake when said slide is in its middle position, substantially as described.

3. The herein described curtain holding device, consisting of a casing, a slide mounted therein and having a limited vertical motion, a spring for lifting said slide, a friction wheel journaled in said slide and containing a socket for the reception of the roller spindle, a rim brake for acting on said friction wheel, and a toggle for pressing said brake against said wheel as the latter moves vertically, substantially as described.

4. The herein described curtain holding device, consisting of a casing, a slide mounted therein and having a limited vertical motion, a spring for lifting said slide, a friction wheel journaled in said slide and containing a socket for the reception of the roller spindle, a friction band or brake extending around the rim of said friction wheel, toggles pivoted to the adjacent ends of said band and to the sides

of said casing in such a manner that when said slide is in its middle position said band will be in engagement with said wheel, substantially as described.

5 5. The herein described curtain holding device, consisting of a casing, a slide mounted therein and having a limited vertical motion, a spring for lifting said slide, a friction wheel journaled in said slide and containing a socket
10 for the reception of the roller spindle, a fric-

tion band or brake in two parts extending around the rim of said friction wheel, toggles pivoted to the adjacent ends of such band and to the sides of the casing at the top and the bottom of said wheel to operate said bands, 15 substantially as described.

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Witnesses:

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