

N. CAMPBELL.

Improvement in Curtain-Fixtures.

No. 114,917.

Patented May 16, 1871.

Fig 1.

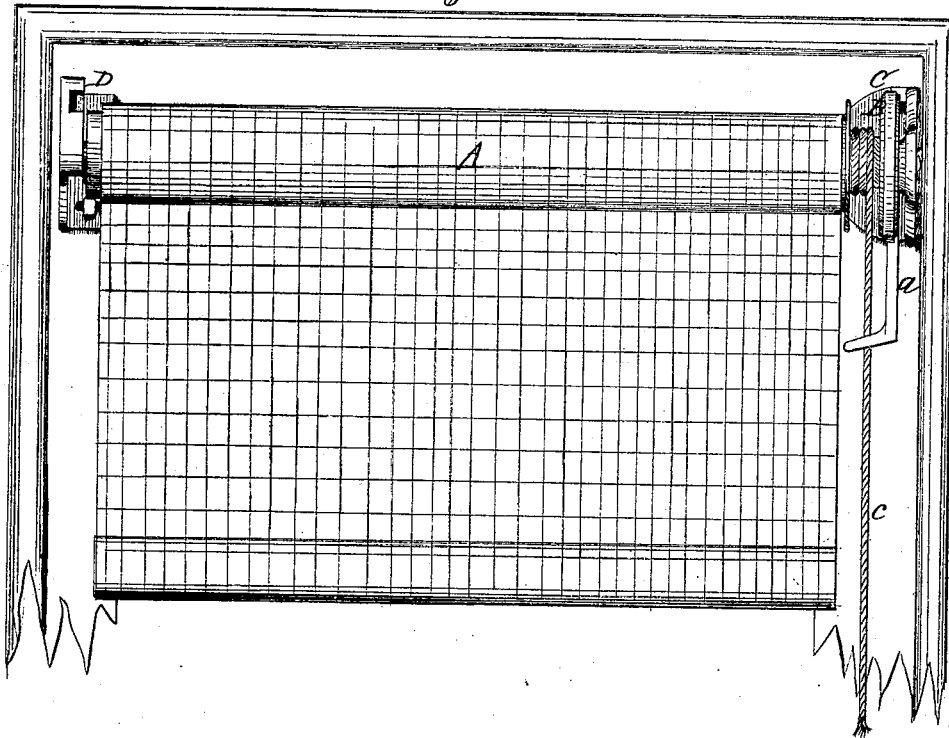


Fig 3

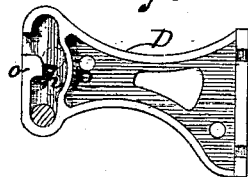


Fig 2.

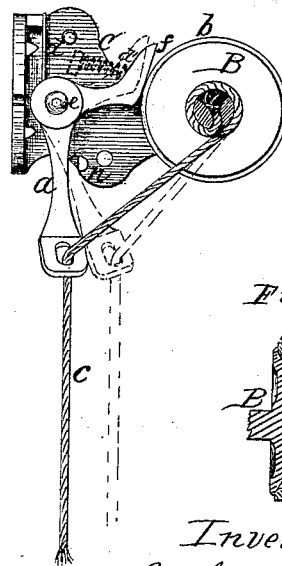


Fig 4

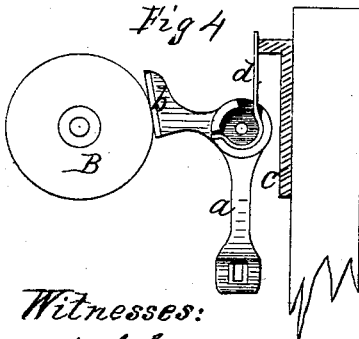


Fig 5

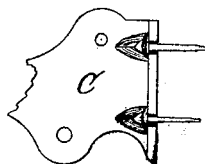
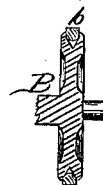


Fig 6



Witnesses:

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NATHAN CAMPBELL, OF ROCHESTER, NEW YORK.

Letters Patent No. 114,917, dated May 16, 1871; antedated May 12, 1871.

IMPROVEMENT IN CURTAIN-FIXTURES.

The Schedule referred to in these Letters Patent and making part of the same.

I, NATHAN CAMPBELL, of Rochester, in the county of Monroe and State of New York, have invented certain Improvements in "Curtain-Fixtures," of which the following is a specification.

My invention relates to that class of fixtures in which a locking-lever is disengaged from the roller by the elevating-cord, and consists chiefly in a novel arrangement of such lever in connection with a spring and a frictional locking surface.

In the drawing—

Figure 1 is a front view of a shade and improved fixture.

Figures 2 and 3 are side elevations of the sustaining brackets.

Figures 4, 5, and 6 are details.

The usual forms of this class of fixtures, consisting of a ratchet and pawl or stop, operated by the weight of the curtain, are objectionable on account of the noise made by the ratchet-teeth and stop, the liability of their not working at all when improperly put up, and the inconvenience of giving the elevating-cord the outward swing necessary to unlock the lever when lace or other curtains are hung over the shades.

In my improved fixtures the gudgeons of the roller A, which may be attached to the latter in any ordinary manner, rest in fixed bearings in the brackets C D.

The elevating-cord *c* passes from the spool B through an opening in the lower extremity of the lever *a*, fig. 2, and thence downward near the window-casing in the usual manner.

The lever *a* is pivoted to the bracket C at the point *e*, nearly or quite in a horizontal line with the center of the roller, and its upper end has an elongated face, *f*, arranged to come in contact with the periphery of the ring of rubber *b*, or other similar yielding material, upon the roller or spool B.

The hub *e* of the lever *a* is formed to receive the end of a plate-spring, *d*, the opposite end bearing against a part of the bracket in such a manner as to force the face *f* against the spool or frictional surface *b*, as shown in fig. 4.

It will be observed that a pull upon the cord *c* in a vertical line draws the lever over to the position indicated in dotted line in fig. 2, lifting the face *f* from the spool, and allowing the curtain to unroll by its own weight, the cord, meantime, running through the hand of the operator.

When the cord is released the spring *d* forces the lever against the spool and locks it in that position, operating similarly also when the curtain is elevated.

The point of contact of the lever and the frictional surface *b* lies above a line drawn through the center of the roller-gudgeon and the center *e* of the lever; consequently the greater the weight of the curtain

the greater the friction, the tendency being to force said centers apart.

By means of the peculiar arrangement of the lever *a* with reference to the roller or spool B, I am enabled to operate the device by means of a direct vertical pull upon the cord *c*, instead of a sweep outward, as in the case of other similar fixtures, and thereby not interfere with lace or other curtains which may be hanging over the rolling shades, while at the same time the action of the locking-lever upon the yielding surface *b* is instantaneous and perfectly noiseless.

It is obvious from the above that some form of spring *d* is essential to insure the operation of the parts, and that its tension need only be slightly in excess of the pressure exerted upon the lever *a* by the weight of the cord and tassel.

The ring *b*, when of rubber, is preferably cut from a piece of hose, and "sprung" into a V-shaped groove in the rim of the spool B, as indicated in fig. 6.

In order to obtain quick and sure action of the lever *a* I provide a stop, *n*, upon the bracket, which limits the movement of the former just sufficiently to free the face *f* from the spool, whereby, when the cord is slackened the lever acts instantaneously to stop the motion of the roller.

In using light shades it sometimes happens that the left-hand gudgeon jumps out of its socket and the shade falls. To obviate this difficulty the bracket D is provided with an elongated recess, *h*, to receive the roller-gudgeon, and an opening in the side flange to admit the latter when put up, as described in the patent of J. Chase, dated March, 1867.

To further insure against accidents of this kind, however, a stop, *o*, is located within the recess, *h*, against which the gudgeon strikes when it lifts, and an enlargement, *p*, may be made in the recess opposite the lug, to allow the gudgeon to pass when entered.

In fig. 4 I have shown a substitute for the locking device above described, in which the yielding material is secured to the end of the lever *a* and bears against the plain surface of the roller or spool B. It is not preferable, however, to the former plan.

Instead of the plate-spring, *d*, other convenient forms may be employed, one of which is indicated in dotted lines, *d'*, fig. 2.

Openings are provided in the brackets C and D for attachment to the casing or jamb of the window, by means of nails or screws, as shown in figs. 2, 3, and 5.

By making the face *f* somewhat convex, as shown in fig. 2, it is evident that it clears the surface *b* by a slight movement of the lever, insuring quick and easy action of the parts in locking and unlocking.

It is evident that a weight upon the lower end of

the lever *a* would operate similarly to the spring *d*, but would not be so convenient.

What I claim as my invention is—

1. The combination of the spring locking-lever *a* and spool B with the cord *c*, for the purposes set forth.

2. The stop *n* upon the bracket C, in combination with the locking lever *a* and elevating-cord *c*, arranged

to operate substantially as and for the purposes set forth.

3. The bracket D, provided with the recess *h* and stop *o*, with the enlargement *p*, substantially as set forth.

Witnesses:

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