N. CAMPBELL.

Improvement in Curtain-Fixtures.

No. 114,918 Patented May 16, 1871.

Fig 1.

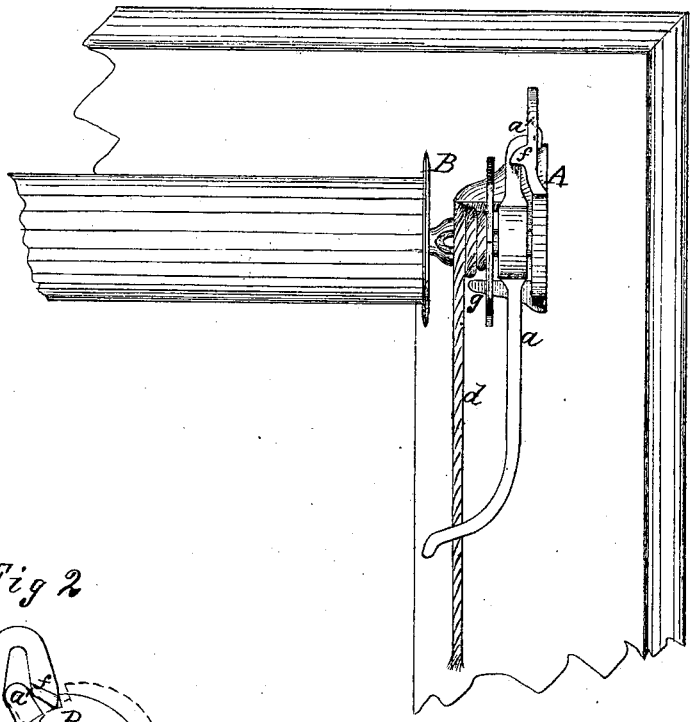


Fig 2

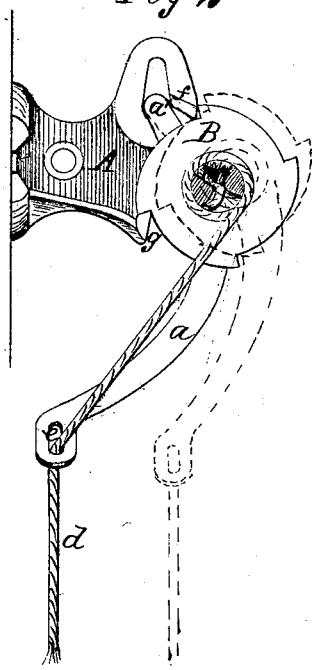
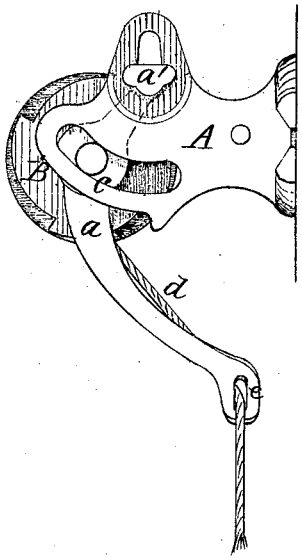


Fig 3.



Witnesses:

Geo. T. Parker

Everal Bradley

Inventor:

N. Campbell.

By M. S. Longborough & Co.

Attys

United States Patent Office.

NATHAN CAMPBELL, OF ROCHESTER, NEW YORK.

Letters Patent No. 114,918, 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 consists more particularly in a modification of a fixture patented by J. Chase, March, 1868, by which the roller is unlocked by a direct downward pull upon the elevating-cord.

In the drawing—

Figure 1 represents a front view of the locking-bracket and connected parts.

Figures 2 and 3 are side elevations of the same.

The gudgeon of the spool B has a bearing in a boss formed upon the pendulous lever *a*, and the latter is pivoted in a suitable manner to the bracket A.

The elevating-cord *d* passes from the spool through an opening, *e*, in the lower arm of the lever, and extends downward near the window-casing, usually terminating in a tassel.

One rim of the spool B is provided with ratchet-teeth, which engage with a stop, *g*, upon the bracket, and when so engaged prevent the roller from revolving in the direction of the gravitating tendency of the curtain.

Thus, when the cord *d* is pulled the lever *a* is swung outward, as indicated in dotted lines in fig. 2, and the spool B with it, releasing the ratchet from the stop *g* and allowing the curtain to descend, the cord meantime drawing through the hand of the operator, who exerts only a slight pressure upon it.

The curtain is in turn raised by drawing the cord, which, as soon as released, allows the ratchet to engage with the stop *g*, locking the roller at any required point by its own weight upon the lever.

It is evident from the above that I adopt the main features of the device patented by said Chase, (of which patent I am now part owner,) but I have sought by my improvements to render the fixture more convenient and devoid of the objections to which the other was liable.

Thus the Chase fixture had a straight lever hanging perpendicularly from the pivoting point, and the cord passed through it either at a point directly under the center of the roller or some distance outside of it, and consequently it was necessary to give the cord or tassel a swing outward into the room in order to unlock the ratchet, rendering the fixture worthless when lace or other curtains were hung over the rolling shades.

Also, since the pivoting point of the lever was directly over the center of the roller, it is plain that the gravity of the curtain was insufficient to insure a safe locking of the ratchet, as a swing of the curtain by a draught of air or otherwise was liable to draw it away from the stop and allow the curtain to descend suddenly.

By reference to figs. 2 and 3 it will be observed that the pivoting *a'* of the lever *a* is somewhat within a vertical line through the center of the roller, and therefore the weight of the curtain always exerts a pressure laterally upon the lever to retain the ratchet in contact with stop, and more than counterbalances the tendency of the lower end of such lever to swing toward the operator by its gravity.

By constructing the lever so that the cord passes through the opening *e*, considerably within the vertical line above named, it is plain that a direct downward pull upon such cord unlocks the ratchet by swinging the lever outward, as indicated in dotted lines, fig. 2. Thus I render the device perfectly safe in its operation, and make it convenient for use with other curtains.

For the purpose of limiting the swing of the lever to just sufficient to free the ratchet from the stop, I provide a curved slot, *c*, fig. 3, in the bracket, into which the gudgeon of the roller projects.

It is plain that the movement of the latter, and consequently of the lever, is limited by the length of the slot.

The lug *f*, figs. 1 and 2, cast upon the bracket, accomplishes the same object.

What I claim as my invention is—

The arrangement of the cord-opening *e* in the lower end of the lever, with relation to the center of the curtain-roller and to the pivoting point of said lever, whereby the ratchet is unlocked by a direct downward pull upon the elevating-cord, in the manner set forth.

N. CAMPBELL.

Witnesses:

F. H. CLEMENT,

GEO. T. PARKER.