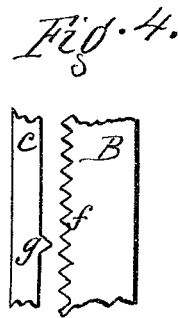
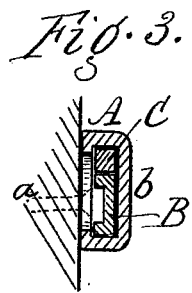
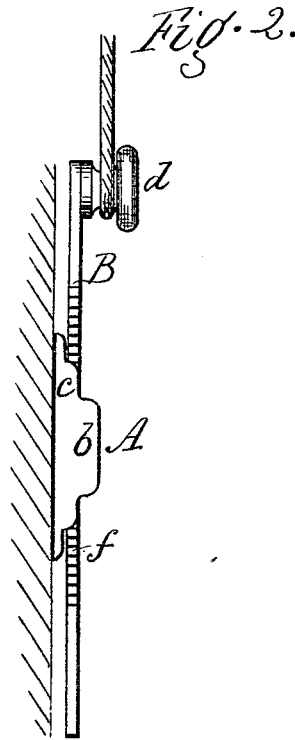
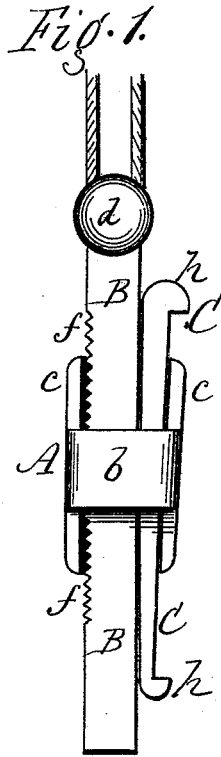


N. CAMPBELL.  
CURTAIN CORD TIGHTENERS.

No. 183,128.

Patented Oct. 10, 1876.



Witnesses.  
E. B. Scott.  
Louis O'Sahur.

Inventor.  
Nathan Campbell  
By R. F. Osgood,  
Atty.

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Fig. 1.

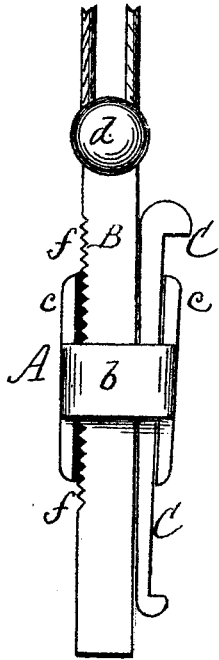


Fig. 2.

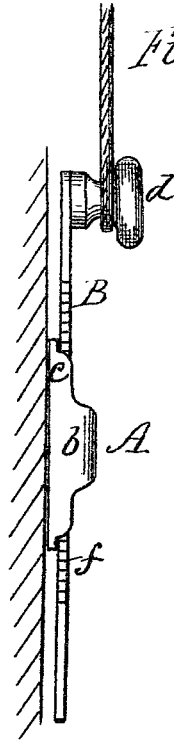


Fig. 3.

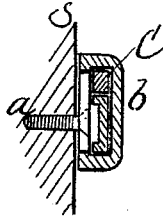
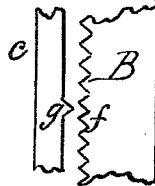


Fig. 4.



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# UNITED STATES PATENT OFFICE.

NATHAN CAMPBELL, OF ROCHESTER, NEW YORK.

## IMPROVEMENT IN CURTAIN-CORD TIGHTENERS.

Specification forming part of Letters Patent No. 133,128, dated October 10, 1876; application filed February 12, 1876.

*To all whom it may concern:*

Be it known that I, NATHAN CAMPBELL, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Curtain-Cord Fasteners; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of the attachment. Fig. 2 is a side elevation. Fig. 3 is a cross-section. Fig. 4 is a detail view, showing the ratchet arrangement.

My invention relates to an attachment for tightening the cords of curtain-rollers; and consists of a device constructed, arranged, and operating as follows:

A is a frame or case, attached to the side of the window-casing by screws *a a*. It has a loop or holder, *b*, and two side flanges, *c c*, which serve as guides and ways to keep the ratchet-slide and wedge in place.

B is the ratchet-slide, carrying at its upper end a knob or hook, *d*, around which the curtain-cord passes, and provided with a set of ratchet-teeth, *f f*, in one edge, which engage with one or more fixed teeth, *g*, Fig. 4, of the frame A. When so engaged the slide is held at any adjustment. This slide rests within the case A, being held in place by the loop *b* and flanges *c c*, before described, but allowed a free movement up and down.

C is the key, which also fits into the case A on one side of the slide B. It is made of the wedging form shown, the narrow end standing downward, and it has at the ends shoulders or heads *h h*, which form finger-holds.

The operation will be readily understood. The cord from the curtain-roller is passed around the knob *d*, and is then tightened or strained by raising the wedge C to release the slide B, and then drawing the latter downward in the case till the cord is taut. The wedge is then pressed down or allowed to drop of its own weight down in place beside the slide, which engages with the ratchet *f* and tooth *g*, and the cord is thus firmly held.

It will be seen that the space between the flanges *c c* is somewhat wedging, to cause the key to fit the side of the slide accurately,

and of such width that when the key is raised the ratchet can be disengaged from the fixed tooth.

The slide on the inner side is preferably made concave or hollow, as shown in Fig. 3, in order to lessen the weight of metal and give strength, also to slide readily over the heads of the screws which attach the case or frame to the wood-work.

This fastener is exceedingly cheap, as it can be made of cast metal and very light. It requires little or no fitting. It has any desired range of motion. It is easily attached, and there is no danger of disengagement of the ratchet from the tooth or slipping, which is a source of trouble in many fixtures for this purpose. It is also self-tightening, as the key or wedge always works downward of its own weight.

A special advantage of this invention is the locating of the ratchet-teeth *f* at the edge instead of the face, which is the location in ordinary fixtures. By this means all loose space between the loop *b* and the back of the case is filled by the slide itself, and the wedge C moves closely up and down in its socket, thereby preventing the swaying and swinging of the slide which usually occurs. Greater strength is also produced thereby.

I am aware that sliding rack-bars are used, and also wedges resting bodily between the back of the case and the slide which carries the cord knob or hook. Such are not the equivalent of my invention, which has the ratchet-teeth on the edge of the sliding bar.

What I claim as a new article of manufacture is—

A curtain-cord fastener consisting of the case A, ratchet-slide B, and key C, the ratchet-teeth being upon one edge of the slide, and engaging with a fixed tooth or teeth on the inside of the case A, and the wedge resting between the opposite edge of the slide and the edge of the case, as shown and described, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

N. CAMPBELL.

Witnesses:

E. B. SCOTT,  
J. S. GARLOCK.