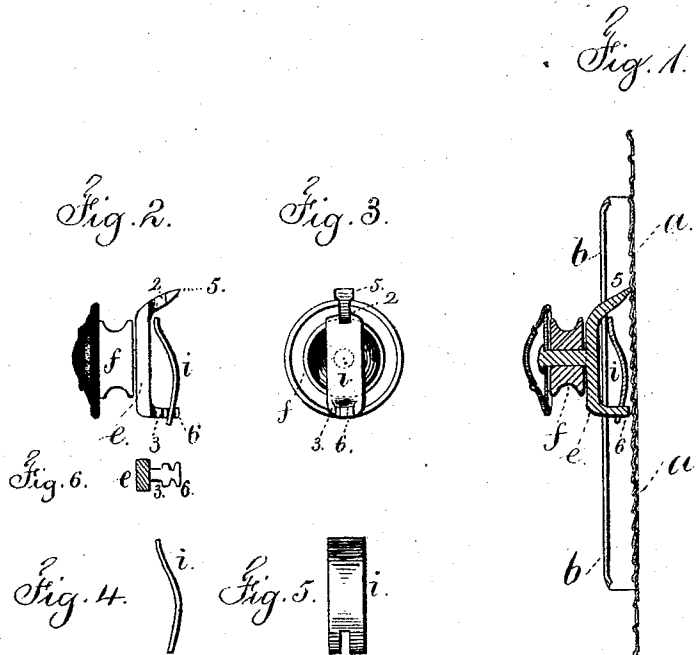


H. L. JUDD.

Cord-Tighteners for Curtain-Fixtures.

No. 155,379.

Patented Sept. 29, 1874.



Witnesses

Chas. H. Smith
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UNITED STATES PATENT OFFICE.

HUBERT L. JUDD, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CORD-TIGHTENERS FOR CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **155,379**, dated September 29, 1874; application filed February 21, 1874.

To all whom it may concern:

Be it known that I, HUBERT L. JUDD, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Cord - Tighteners for Curtain - Fixtures, of which the following is a specification:

Cord - tighteners have been made with the rack - teeth at the back of the slide, and a spring upon the pulley-stock; but these cannot be easily slackened by lifting the spring from the teeth. In other instances a pawl or dog has been made upon the pulley-stock, and the same has been pressed to the teeth by a spring, and the teeth have been upon the front edges of the slide.

My invention is made for connecting the spring to the stock, so that the tooth on the stock will be pressed to the teeth that are upon the slide. This spring has an elongated opening, and is secured to the stock by a T-headed projection, so as to avoid riveting. This spring tends to force the dog to the ratchet-teeth, but allows the pulley-stock to swing in and out, between the edges of the slide, sufficiently for the dog to catch into the rack-teeth, or be withdrawn from the same.

By this construction the parts can be made very strong and cheap, and there is but little work in putting them together.

In the drawing, Figure 1 is a vertical section of the cord-tightener. Figs. 2 and 3 represent the stock of the pulley; and Figs. 4 and 5 show the spring detached. Fig. 6 is a cross-section of the stock.

The rack is made of the usual character, with the teeth *a* and sides *b* forming the slide for the pulley-stock *e*. The pulley *f* may be a separate grooved roller; or it may be cast with the stock *e*. This stock *e* has side grooves for the slide *b*, or else the projections 2 and 3 are provided near the ends for the purpose of forming guides, and retaining the stock within the slide *b*, but, at the same time, allowing free end movement, and a sufficient swinging movement to connect or disconnect the dog or

tooth 5 and teeth *a*. The T-headed projection 6 receives the end of the spring *i*, and secures the same in place. The end of the spring is either forked, or made with an elongated hole, so that, when placed over the T-head, nearly at right angles to the stock *e*, it can be swung around into line with the stock, and the end of the spring turns in behind the dog 5. Hence said spring will be held in place without requiring any rivet.

The moving end of the spring *i* pressing against the inner surface of the portion *b* of the slide, said stock being slipped endwise into place, forces the tooth 5 toward, and into contact with, the rack-teeth *a*; but, when desired to relieve the strain of the cord, the stock *e* can be swung outwardly sufficiently to clear the tooth from the rack, and then the stock can be moved endwise. The tension of the cord causes the tooth 5 to press toward the rack-teeth *a*; and I remark that, when the slide *a* *b* is made of cast metal, the teeth will be upon the surface of the slide-portions *b*, and the tooth or dog 5 will project from the stock in front of said teeth.

I do not claim a spring to throw the tooth into the ratchet, as the same has been used and attached to the slide by rivets; and it has also been received between hooks upon the slide. By my improvement the spring is slotted, and the stock *e* is made with the T-head for the same, and with the side grooves for the slide *b*.

I claim as my invention—

The stock *e*, made with the tooth 5, side grooves for the slide *b*, and the T-head 6, in combination with the spring *i*, that is slotted, as described, to connect with the T-head, as set forth.

Signed by me this 17th day of February, A. D. 1874.

HUBERT L. JUDD.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.