

C. L. GATES.
Curtain-Fixture.

No. 215,218.

Patented May 13, 1879.

Fig. 1.

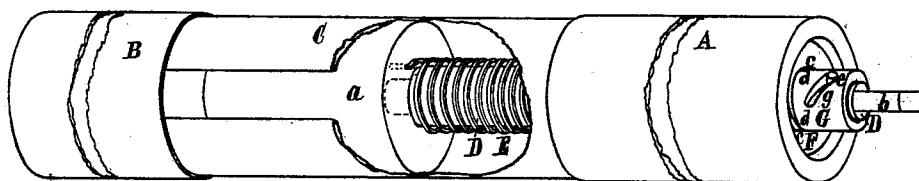


Fig. 2.

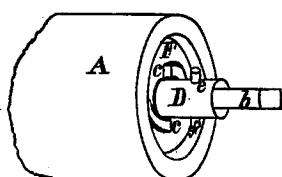


Fig. 3.

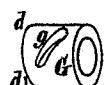


Fig. 4.



Attest;

*H. E. Bathwick,
A. Graye,*

Inventor;

*Cecil L. Gates,
per
Law. Drummer,
Atty.*

UNITED STATES PATENT OFFICE.

CECIL L. GATES, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE FIRM OF EDWARD L. BRAY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **215,218**, dated May 13, 1879; application filed February 14, 1879.

To all whom it may concern:

Be it known that I, CECIL L. GATES, of Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Curtain-Fixtures, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

My invention relates to that class of curtain-fixtures in which a spring in the curtain-roller is employed to counterbalance or roll up the curtain; and it consists in a device or lock by which the spring is prevented from uncoiling when the curtain-roller is removed from the brackets, said lock being a sleeve on the spindle or shaft of the curtain-roller, which is shaped, together with the end of the roller, to form a clutch therewith, and may be moved endwise by a pin or projections fixed on the spindle and working in inclined or spiral slot or slots in the sleeve, or may be moved spirally endwise by the hand.

In the drawings, Figure 1 is a perspective view of so much of a curtain-roller having my device attached as serves to illustrate my invention. Fig. 2 shows the end of roller and spindle, the sleeve being removed. Fig. 3 is a perspective view of the sleeve. Fig. 4 shows the sleeve in a position the reverse of that shown in Figs. 1 and 3.

Different materials and various forms of construction are employed in rollers for curtain-fixtures in which a spiral spring is used in the roller to counterbalance or roll up the curtain. In the style shown the shell of the roller is made of metal, and is in two parts, A and B, the one, B, to slide over a portion, C, of the other part, A, to regulate the length. The end B is formed to run freely in or on a bracket at that end. The roller has a shaft or spindle, D, the inner end of which runs in a bearing in a block, a, which is connected with, as a part of, the roller. The other end, b, of the spindle D is squared, or given other suitable form to be held from revolving while supported in a bracket. The roller at this end revolves on the spindle. A spiral spring, E, envelops the spindle D, having one end fastened to the roller or block a, and the other end to the spindle D.

The spring E being coiled to exert the suitable torsion, it will readily be seen how it will counterbalance the weight of the curtain, and will roll the curtain-up when the weight is lessened, as it is by raising the stick at the bottom.

Some additional attachment is needed in order that when the curtain-roller is taken down and the end b of the spindle D is removed from the bracket, the spring will not revolve the spindle and be itself uncoiled, and also, by preventing the spindle from revolving, be an assistance in coiling the spring to get the required torsion; hence I attach my device or lock. I form the end or head F to have thereon the projections C, and I prefer to sink the head F in, as shown, so as to have the periphery of this head as near the bracket as possible. On the spindle D, I place a sleeve, G, fitted to make part of a revolution on the spindle. On the inner end of the sleeve are projections d, to correspond to those, c, on the head of the roller. These projections, both on the sleeve and roller, are so formed, as shown, that the roller revolving in one direction will slide the sleeve out of clutch with the roller, but, revolving in the other direction, may be clutched by the sleeve when the latter is pressed toward the roller.

Fixed to the spindle D are the pins or projections e and f, as many as may be best—two in this case. These pins extend and work in inclined or spiral slots g and h in the sleeve, as shown.

The form of the projections d and c, and the slots g and h, and the relation of parts, are such that when the end b of the spindle D is removed from its bracket, and hence the spindle free to revolve, the spring E tending to revolve the spindle rapidly, and the sleeve G being at rest, the pins e and f will move in the inclined or spiral slots g and h, and slide the sleeve endwise to bring it in clutch with the roller, and the spring will be prevented from uncoiling further; or the sleeve G may be slid spirally endwise by hand before the end b is removed from its bracket, and thus made to clutch with the roller and prevent the uncoiling of the spring. Afterward, when the roller is hung in the brackets and

revolved in the proper direction, the inclination or bevel of the projections *d* and *e* will cause the sleeve to be moved out of clutch, and the roller may then be revolved in either direction—that is, the curtain raised or lowered.

It will be seen that my device or lock is not confined to a roller having a metallic shell, but is adapted to the many known forms of spring curtain-rollers; also, that the sleeve may be placed on other parts of the spindle—as, for instance, near the block *a*—to clutch with projections thereon; also, that it makes no difference which side up is the spindle *D* for the operation of the device.

I claim as my invention—

1. A sleeve, *G*, having one or more inclined

or spiral slots, *g* and *h*, and combined and operated with a spring curtain-roller having devices engaging with the sleeve, the spindle of which has a pin or projections, *e* and *f*, substantially as hereinbefore described.

2. The combination of the roller having teeth or projections *e*, spindle *D*, having a pin or projections, *e* and *f*, sleeve or clutch *G*, having one or more inclined or spiral slots, *g* and *h*, and projections *d*, substantially as hereinbefore described.

CECIL L. GATES.

Witnesses:

EDW. DUMMER,

NATHL. H. STEVENSON.