E. B. LAKE.

CURTAIN-FIXTURES.

No. 185,763. Patented Dec. 26, 1876.

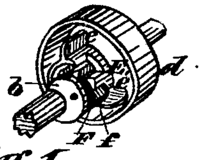

Fig. 1

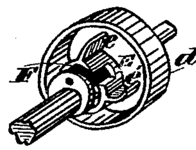

Fig. 2

Fig. 3

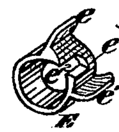

Fig. 4

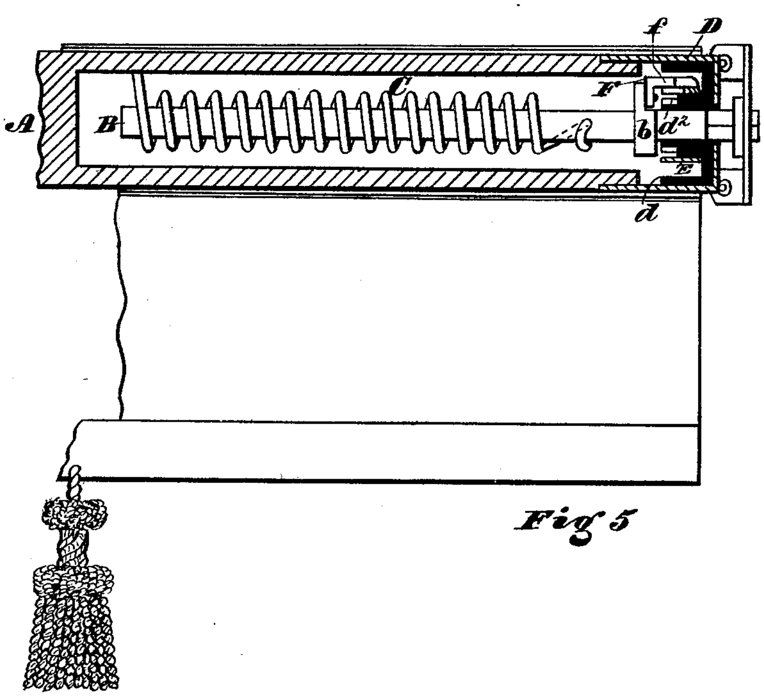

Fig 5

Witnesses.

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EZRA B. LAKE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO SALEM SHADE ROLLER MANUFACTURING COMPANY, OF SALEM, MASS.

IMPROVEMENT IN CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **185,763**, dated December 26, 1876; application filed September 21, 1876.

To all whom it may concern:

Be it known that I, EZRA B. LAKE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Curtain-Fixtures; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figures 1, 2, 3, and 4 are perspective views of detached parts of the roller mechanism. Fig. 5 is a central sectional view of the roller with operating mechanism attached.

The object of my present invention is to make improvements in that class of spring-rollers for curtains or shades to lock which requires the shade to be drawn down, and then permitted to ascend slowly.

The nature of this invention consists in the peculiar construction and combination of parts, as hereinafter more fully described.

Referring to the accompanying drawing, A designates the ordinary wooden roller, with shaft B and spring C. D represents a metallic head, fitted on the end of the roller, and formed with a boss, *d*, through which the end of the shaft B passes. The boss *d* is provided with a friction-collar, d^1, of felt or equivalent material, and is formed with ratchet-teeth d^2.

E is a ring surrounding the boss *d*, snugly fitting the friction-collar d^1, and provided with ears e e^1. e^2 is a slot in said ring, between said ears. F is a pawl, pivoted on the shoulder *b* of the shaft B, its free end having a stud, *f*, which rests on the ring E between the ears e e^1.

The operation is substantially as follows: When the shade is drawn down the ring E turns with the roller A and head D until the pawl F (or stud *f* thereof) meets the ear *e*. The ring E then ceases to revolve; but while the downward motion of the shade is continued, the boss *d* and friction-collar d^1 turn within said ring.

Now, if the shade be allowed to ascend rapidly under the influence of the spring, the ring E will turn with the roller and head D until the stud *f* of the pawl F meets the ear e^1, said stud passing readily over the slot e^2, and not engaging with the ratchet-teeth d^2, being lifted by the swell e^3 and by centrifugal motion over said slot.

The rapid ascent of the shade may continue without causing the pawl to lock. So, too, such rapid ascent may be wholly checked or converted into a slow motion without locking the pawl.

To produce such a lock the shade must not only be checked, but drawn down a short distance, sufficient to allow the ring E to turn, as already described, far enough to permit the stud *f* on the pawl F to meet the ear *e*, said stud passing over the slot e^2, and not engaging with the teeth d^2 on account of the inclination of the latter. The shade is then allowed to ascend slowly for a short distance, when the stud *f* on the pawl F will drop into the slot e^2 and engage with one of the teeth d^2, producing a complete lock.

To manage the shade, therefore, it should be operated as follows: If rolled up, draw down with either a fast or slow motion until the desired position is reached. Then permit it to slowly ascend until locked.

To elevate the shade, draw down slightly to release it from the lock. Then allow it to ascend, starting rapidly, the fast motion being continued, or changed to a slow one, if desired.

To lock the spring, first draw down the shade slowly, thus reversing the upward motion, and then allow it to ascend slowly till the locking is found to be effected.

What I claim as my invention is—

1. In combination with the head D, the boss *d*, having ratchet-teeth d^2, substantially as shown and described.

2. The ring E, having the ears e e^1 and slot e^2, substantially as and for the purpose set forth.

3. The combination of head D, having boss *d*, with ratchet-teeth d^2, ring E, having

ears e e^1 and slot e^2, and pawl F, pivoted on the shaft B, substantially as shown and described.

4. In combination with the boss d and ring E, a friction collar or pad inserted between the two, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of September, 1876.

EZRA B. LAKE.

Witnesses:
M. DANL. CONNOLLY,
CHAS. F. VAN HORN.