E. B. LAKE.

CURTAIN-FIXTURES.

No. 185,762. Patented Dec. 26, 1876.

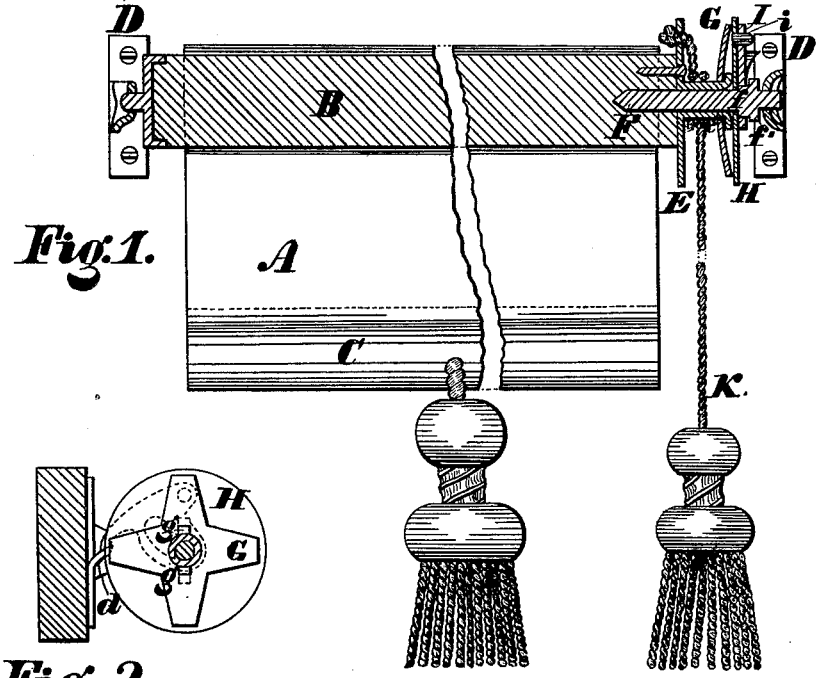

Fig. 1.

Fig. 2.

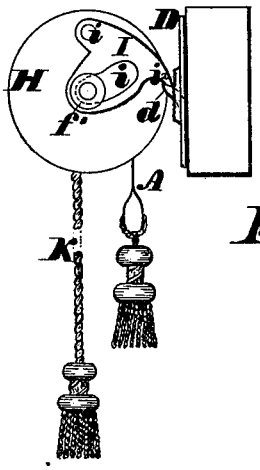

Fig. 3.

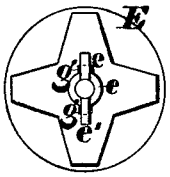

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

EZRA B. LAKE, OF BRICKSBURG, NEW JERSEY, ASSIGNOR TO SALEM SHADE ROLLER MANUFACTURING COMPANY, OF SALEM, MASSACHUSETTS.

IMPROVEMENT IN CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **185,762**, dated December 26, 1876; application filed January 26, 1876.

To all whom it may concern:

Be it known that I, EZRA B. LAKE, of Bricksburg, in the county of Ocean and State of New Jersey, 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—

Figure 1 is a central longitudinal section of a curtain-roller embracing my improvements. Fig. 2 is a cross-section through cord-pulley. Fig. 3 is an end view of roller. Fig. 4 is a detail view.

The object of my invention is to provide a weighted shade which is rolled up by means of a cord, and which is checked in its descent by a pawl with a frictional arrangement, whereby, when so checked by said pawl, the shade may be drawn down by pulling, as hereinafter more fully described.

In carrying this invention into effect I provide a weighted shade, which, when not checked, will roll down or unwind by gravity. For rolling up or winding said shade I provide a single cord, operating in connection with a pulley attached to the shaft on which the shade is hung. Operating in connection with said shaft and pulley, and attached to said pulley, is a pawl so arranged that, as may be desired, the descent of the shade may be checked automatically by said pawl on a fast motion. This pulley is so constructed that, notwithstanding the checking action of the pawl, which is sufficient to overcome the gravity of the shade, the latter may be drawn down by a strong pull, overcoming a frictional resistance between that part of the pulley to which the cord is attached and the part to which the pawl is secured, and against which it works.

Referring to the accompanying drawing, A designates a shade, hung on a roller, B, and weighted at C, said shade being sustained in brackets D D. E designates a flat disk, fast on a shaft, F, said shaft being driven into the roller B, as shown. The disk E is formed with or united to a drum, *e*, to the opposite end of which is applied a concave disk or X-shaped washer, G, the disk G being prevented from rotating, except with the drum *e*, by means of the studs *e'* entering notches *g* in said disk. H represents another disk, held in close contact with the washer G by means of the shoulder *f* on the shaft F. This disk would revolve freely on the shaft F, but for the frictional resistance of the washer G, whereby it results that when said frictional resistance is overcome, the shaft F may be revolved, and with it the drum *e* and disk E, notwithstanding the disk H is prevented from revolving. I represents a gravity-pawl, pivoted at *i*, and provided with a slot, *i'*, through which passes the shaft F, a shoulder, *f'*, on said shaft preventing said pawl from flying laterally out of position. When the shade A is allowed to descend at a moderate velocity under the influence of the weight C, (the cord K being lightly held for that purpose,) the pawl I will move clear of the stop *d* on the bracket D; but if the motion of the shade be accelerated by letting go of the cord, sufficient centrifugal force will be generated to cause the pawl I so to fly out that its extreme end *i²* will engage with the stop *d*. This abruptly checks the revolution of the roller B and the downward motion of the shade. But the shade may not then be adjusted at the exact height required, or it may be desired, for any reason, to lower it farther without releasing the locked pawl. To accomplish this, therefore, it will be only necessary to pull down on the shade with sufficient force to overcome the frictional resistance between the washer G and disk H. This will cause the shade to be lowered, the disk E, drum *e*, shaft F, and washer G revolving, while the disk H and pawl I remain stationary.

The revolution of the drum *e* while the shade is descending coils the cord K on said drum, so that said shade may be wound up on its roller, when desired, by merely drawing upon the cord.

What I claim as my invention is—

1. In combination with a roller and curtain or shade, operating to descend by gravity and

be wound up by a cord, and provided with an automatically-operating pawl, pivoted on the cord-pulley and adapted to check the descent of said shade, a frictional device having resistance sufficient to overcome the weight attached to the shade, but contrived to yield when the curtain is drawn down forcibly, without disengaging or unlocking the pawl, as set forth.

2. The pawl I and shaft F, having shoulders *f f'*, in combination with the friction-pulley, composed of the drum *e*, disks E H, and friction-washer G, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of October, 1875.

EZRA B. LAKE.

Witnesses:
GEO. C. SHELMERDINE,
SAML. J. VAN STAVOREN.