E. B. LAKE.

Curtain-Fixture.

No. 162,666. Patented April 27, 1875.

Fig 1

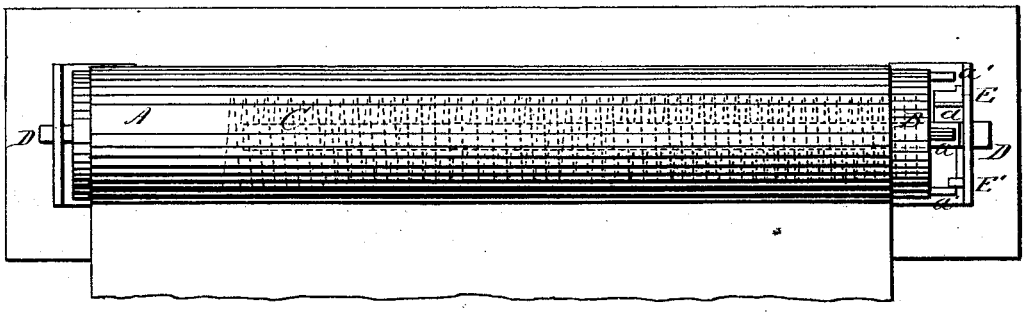



Fig 3

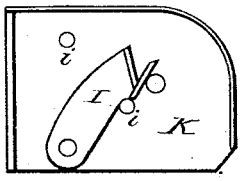



Fig 5

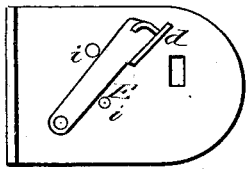



Fig 4

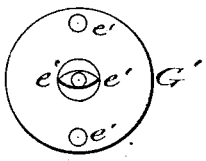



Fig 6

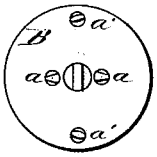
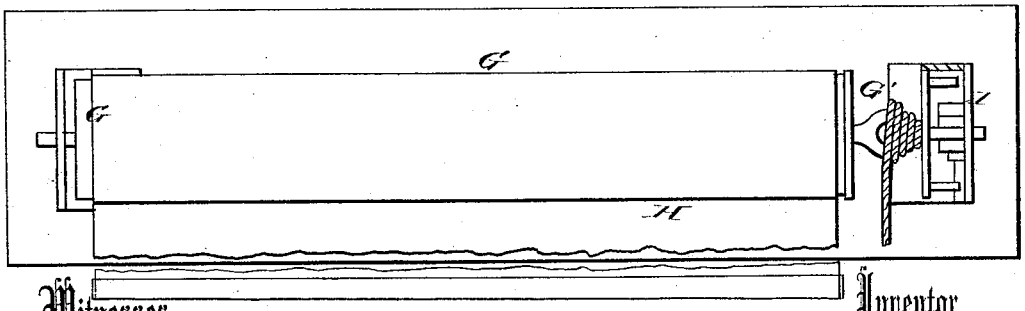



Fig 2




Witnesses

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# UNITED STATES PATENT OFFICE.

EZRA B. LAKE, OF TOM'S RIVER, NEW JERSEY.

## IMPROVEMENT IN CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **162,666**, dated April 27, 1875; application filed January 28, 1875.

*To all whom it may concern:*

Be it known that I, EZRA B. LAKE, of Tom's River, 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 side view of a spring-roller provided with my improvement. Fig. 2 is a side view of plain roller, operated by weighted curtain and single cord, and provided with my improvement modified. Figs. 3 and 4 are details of devices applicable to plain roller. Figs. 5 and 6 are details applicable to spring-roller.

This invention has relation to certain improved means for preventing the too rapid motion of rolling window-shades; and it consists in the provision of a pawl, which is pivoted to one of the roller-brackets, and formed with a recessed head, and of studs projecting from the adjacent end of the roller, whereby, when the roller is rotated at too great a speed, said pawl will be thrown outward by the innermost studs, so as to engage with one of the outermost studs, but when the roller is rotated slowly will ride upon the innermost studs, and allow the roller to turn without obstruction.

In the accompanying drawings the principle of my invention is shown under two modifications, adapted for use, respectively, in connection with a roller operated by means of a coiled spring, and one having a weighted curtain, which unrolls itself.

In Fig. 1, A designates a roller containing a spring, C, and having a cap, B, through which projects the stationary shaft D, to which one end of the spring is secured, the other end being attached to the roller, so that when the curtain is unrolled the spring will be wound or contracted in order that it may afterward roll up the curtain automatically. *a a a' a'* designate studs projecting from the end of the cap on different circumferential lines, respectively, *a a* being near the center, and *a' a'* near the edge. E represents the pawl or dog, pivoted to the bracket E', and having a head, *d*, projecting laterally toward the roller, and recessed in its back part, as shown. When the curtain is being lowered, or when, being held and controlled by hand, it rolls up slowly, the pawl rides upon the studs *a a*, allowing the studs *a' a'* to swing around outside the head. When, however, the curtain is released, and the roller begins to turn rapidly, the studs *a a*, acquiring momentum, forcibly project the pawl outward in the way of the studs *a' a'*, so that one of the latter is caused to enter the recesses at the back part of the head, thereby stopping the roller.

In Fig. 2 is shown my invention modified to adapt it to use in connection with a roller, G, having a single cord-pulley, G', and holding a weighted curtain, H. I represents the pawl, pivoted to the bracket K, and provided with a laterally-projecting head, which is recessed in front, the object being to prevent the too rapid descent of the curtain, which unrolls and lowers itself automatically. The single cord-pulley is provided with studs *e' e'*, the same as *a' a'* of Fig. 1, and may have other studs to correspond with *a a*, or, instead, may have the end of the shaft formed of a cam shape, with wings *e' e'*, serving the same purpose as studs, the latter being only specially required when the shaft is stationary. When the weighted curtain is raised by means of the cord, or when allowed to descend slowly, the pawl remains in contact with the end of the shaft or journal; but when the curtain is permitted to descend rapidly, the pawl is thrown outward by the wings *e e*, and is caught by one of the studs *e' e'*. J designates a flange projecting from the bracket K, for the purpose of preventing the cord from slipping and catching upon the pawl or studs. *i i* designate bracket-stops to limit the play of the pawl.

It is manifestly within the spirit and scope of my invention to construct said pawl or dog with a double-recessed or equivalently-formed head, so that it may be caught when thrown outward by either the too rapid ascent or descent of the curtain. I employ the term "recessed" in describing the head of the pawl to explain clearly its function; but I retain the privilege of using any device or form of head which will serve to effect the same result.

I do not claim, broadly, as my invention, a pawl pivoted to the bracket, and thrown outward by the revolution of the roller, as such a device has heretofore been used.

I claim—

In combination with a curtain-roller having studs projecting at different radial distances from its end, or from an attachment thereto, a separate pawl or dog, constructed and arranged substantially as described, so that when the roller turns slowly said pawl will ride upon the innermost studs, but when said roller is turned rapidly will be projected outward by them, and be caught by one of the outermost studs, as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of January, 1875.

EZRA B. LAKE.

Witnesses:

WILLIAM H. BEAKE,

I. W. CARMICHAEL.