(No Model.)

H. W. SIMMS.

CURTAIN FIXTURE.

No. 345,811. Patented July 20, 1886.

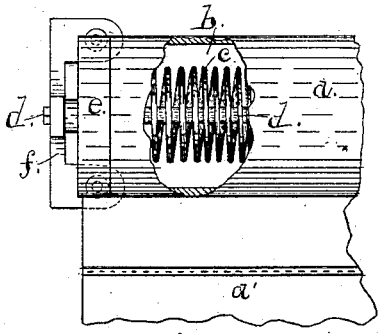

Fig. 2.

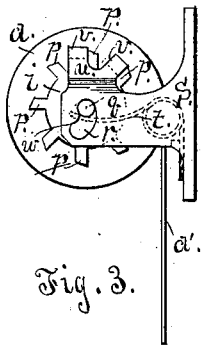

Fig. 3.

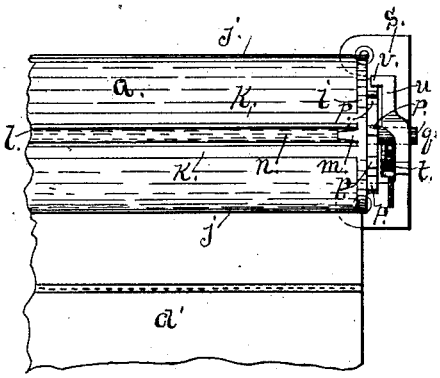

Fig. 1.

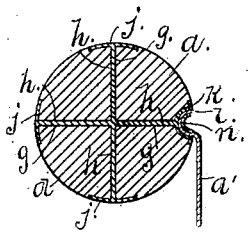

Fig. 5.

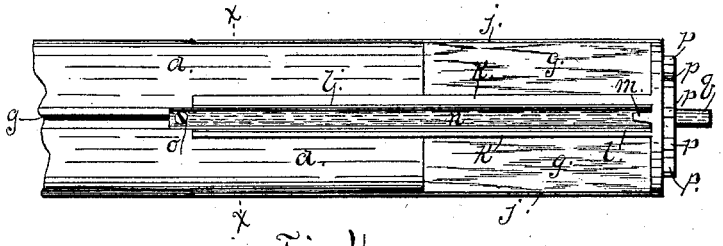

Fig. 4.

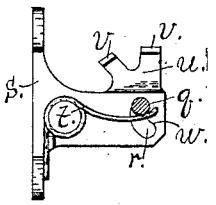

Fig. 7.

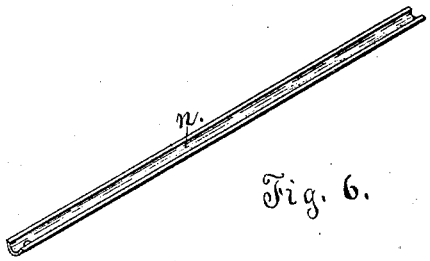

Fig. 6.

Attest:

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Jacob G. Tut

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Henry W. Simms

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Atty

UNITED STATES PATENT OFFICE.

HENRY W. SIMMS, OF BAY CITY, MICHIGAN, ASSIGNOR OF ONE-HALF TO FERDINAND JOHNSON, OF SAME PLACE.

CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 345,811, dated July 20, 1886.

Application filed January 18, 1886. Serial No. 188,857. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. SIMMS, a citizen of the United States, residing in Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Curtain-Fixtures, of which the following is a full, clear, and exact description.

This invention relates to that class of curtain-fixtures in which a spring is arranged within the roller, and operates to revolve the roller and wind the curtain thereon, and in which the roller is supported by a slotted bracket having a spring sustaining the roller-journal, and a ratchet and pawl for retaining the roller in any position is used; and my improvement consists, chiefly, in forming a curved slot, so that the device may be more easily and satisfactorily operated, and in the construction, arrangement, and combination of the parts, as I hereinafter more fully describe and claim; and the object of the invention is to provide an easy and effective means of changing the length of the roller, to adapt it to windows of different widths, and to arrange a stopping device which will check the revolution of the roller at any desired point, so that when the curtain is pulled down to the proper position and quickly released, the device will hold it in that position without any attention being given to the catching device. I attain these objects by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view of a portion of the roller and the fixture. Fig. 2 is a front view of the opposite end of the roller, with a portion cut out, showing the inclosed spring. Fig. 3 is an end view of the fixture. Fig. 4 is a front view of a portion of the roller with the extension partly drawn out. Fig. 5 is a section at *x x*. Fig. 6 is a view of a portion of Fig. 4 detached. Fig. 7 is an inside view of the bracket shown in Fig. 3.

Similar letters refer to similar parts throughout the several views.

A represents a roller, upon which the curtain is to be wound. In one end of this roller is a cylindrical chamber, *b*, and within the chamber is placed a coil-spring, *c*, one end being secured to the roller and the opposite end to the rod or shaft *d*, which is passed into the center of the chamber through the end piece, *e*. The outer end of this shaft *d* is arranged with flattened sides, which are passed into a suitable bearing in the supporting-bracket *f*, so that when the roller is revolved the shaft *d* will remain stationary, and the spring *c* will receive a tension which will, when the roller is released, cause it to revolve in the opposite direction. In the opposite end of the roller is cut the slits or openings *g*, and into these openings are passed the wings *h* of the extension-piece *i*. Upon the outer edges of these wings *h* are arranged the flanges *j*, which lap over the outside of the roller at the edges of the slits *g*, and serve to support the parts between the slits, and to support the curtain between the wings when the piece *i* is partly withdrawn for extending the roller. Upon one of the flanges *k* is arranged a groove, *l*, in the outer end of which is secured a lug or projecting part, *m*. The under side of this lug *m* is beveled toward the groove, leaving somewhat more space between the outer end of the lug and the groove than at the inner end, and a piece, *n*, curved to fit the groove, is placed within the same, and with one end beneath the lug *m*, and with its opposite end extending beyond the flange *k*, and held in position by a screw, *o*, passing through the extended end and into the slit in the roller. Upon the outer end of this extension *i* are arranged notches or teeth *p*, and a central pivot, *q*, which rests in a hole, *r*, formed in the bracket *s*. This hole *r* is in the form of a curved slot, the length of the slot being nearly vertical, and the pivot *q* is held in position in the upper part of the slot *r'* by a spring, *t*, which is secured to the bracket. An upward-extending portion, *u*, of the bracket is provided with inwardly-projecting teeth *v*, which are arranged to engage with the teeth *p* when the pivot *q* is resting in the upper part of the slot *r*, and to pass clear of the teeth when the pivot rests in the lower part of the slot. In operating the device, the extension *i* is placed in a proper position to conform to the width of the window. The curtain *a'* is then secured to the extension part *i* by placing the piece *n* upon the edge of the curtain, first, however, placing the end of the piece *n* beneath the lug *m* and pressing the edge of the curtain into the groove *l*, and the

screw *o* is then passed through the piece *n* and the curtain and into the roller, pressing the curtain firmly into the groove. This piece may be provided, if necessary, with projecting teeth, which press into the curtain to assist in holding it in position. The remaining portion of the upper edge of the curtain may be nailed or otherwise secured to the roller, which is then placed in position in the brackets *f* and *s*, which have previously been properly secured to the casing with the spring *t*, holding the pivot *q* in the upper portion of the slot *r*. The proper tension is then given to the spring *c* and the curtain wound upon the roller. The teeth or notches *p* then engage with the teeth *v*, and prevent the spring from further action upon the roller.

For operating the curtain the free end of the curtain is drawn downward, which first acts to move the pivot *q* to the lower portion of the slot *r*, thereby releasing the teeth *p* and *v* from engagement, and then the curtain may be drawn downward until the desired point is reached, when the curtain is released and the pivot at once is lifted by the spring *t* to the upper portion of the slot, and the teeth *p* and *v* are again brought into engagement. In order to again raise the curtain, the free end of the curtain is drawn downward until the teeth *p* and *v* are released from engagement and held free, and the hand gradually raised to allow the curtain to wind upon the roller until the desired position is reached, when the curtain is again released and the teeth *p* and *v* engage and hold the curtain, as before. The tension of the spring *c* must be regulated so that the roller will revolve while power enough to overcome the tension of the spring *t* is applied by the hand. This slot *r* may be straight and produce a similar effect, but I prefer to slightly curve the sides thereof, so that when the pivot *q* rests against the curved side *w*, a portion of the tension of the spring *t* is brought to bear against the side *w*, which allows the curtain to be more easily governed by the hand when being raised.

I am aware that curtain-rollers formed of two parts and having an extension-piece with wings sliding between the parts is in use, also that a pawl and ratchet is not new in connection with curtain-fixtures, and I do not claim the same, broadly; but with the construction and arrangement of the parts as I herein describe I produce a more durable and easily-operated device, as well as reduce the cost of the manufacture of the same.

I claim—

1. In a curtain-fixture, a shade-roller having the slits *g* cut through and quartering the roller for a portion of its length, in combination with the extension-piece *i*, having the wings *h* passed into the slits, and the pivot *q* on its outer end, the flanges *j*, projecting on each side of the outer edges of the said wings and extending their entire length, and adapted to support the curtain between the wings when the extension is partly withdrawn from the roller, substantially as and for the purpose herein set forth.

2. In a curtain-fixture, the combination of the curtain-roller *a*, having the slits *g* in one end, the extension-piece *i*, provided with the wings *h* passed into the slits, and the flanges *j* and *k* on the edges of the wings, with the groove *l* formed in the flange *k*, the piece *n* within the groove, the lug *m*, and the screw *o*, holding the piece *n* in position, and the pivot *q*, substantially as herein set forth.

3. In a curtain-fixture, the curtain *a'*, the roller *a*, having an actuating-spring, the pivot *q*, and teeth *p* upon the end of the roller, the supporting-bracket *s*, having the extended part *u* and teeth *v*, and the lifting-spring *t* beneath the pivot, in combination with the slot *r*, having a curved portion, *w*, at its lower end, whereby the resistance of the spring *t* is partly overcome when the curtain is being operated, substantially as and for the purposes herein set forth.

4. In a curtain-fixture, the combination, with the curtain and roller having an actuating-spring, the teeth *p* and pivot *q* upon the end of the roller, the bracket *s*, having the curved slot *r*, carrying the pivot, of the part *u*, extending from the bracket above the said slot and provided on its upper portion with the teeth *v*, substantially as and for the purpose herein specified.

In witness I hereunto affix my signature.

HENRY W. SIMMS.

Witnesses:

W. H. POWER,

J. E. THOMAS.