

(No Model.)

W. H. LINCH.  
CURTAIN FIXTURE.

No. 302,147.

Patented July 15, 1884.

Fig. 1.

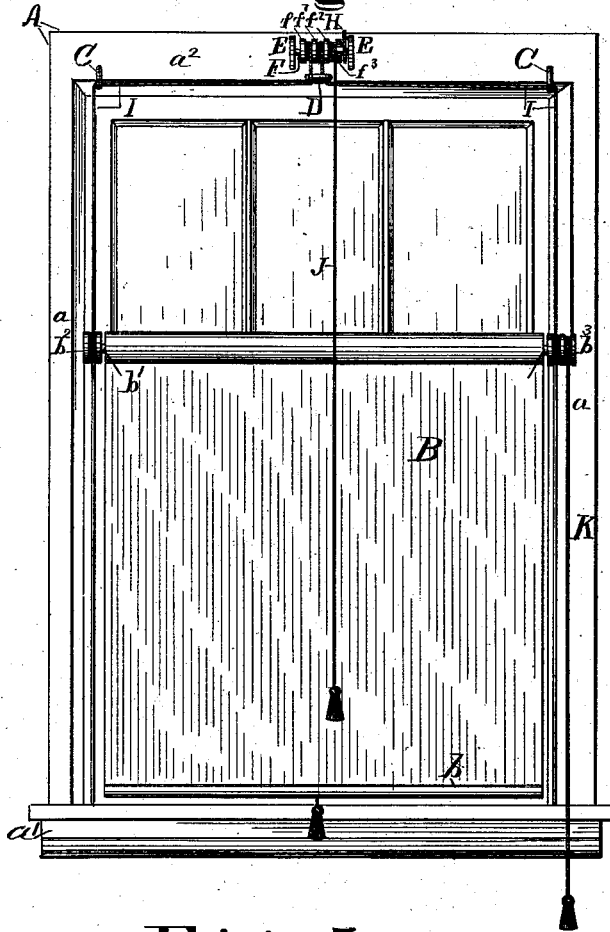


Fig. 2.

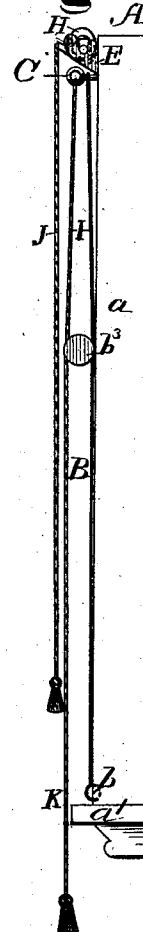


Fig. 3.

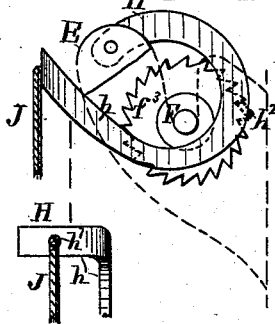
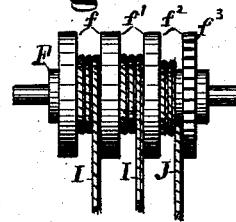


Fig. 4.



Fig. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM H. LINCH, OF NEW MATAMORAS, OHIO.

## CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 302,147, dated July 15, 1884.

Application filed May 29, 1884. (No model.)

### *To all whom it may concern:*

Be it known that I, WILLIAM H. LINCH, a citizen of the United States, residing at New Matamoras, in the county of Washington and State of Ohio, have invented certain new and useful Improvements in Curtain-Fixtures; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The invention belongs to that class of devices by which the upper rod or roller of a window-curtain may be raised or lowered to any desired position across the window, the lower rod of the curtain remaining stationary meanwhile, because the upper rod revolves, while descending, in such direction as to roll up the curtain, and unrolls the same while ascending, the object of all such devices being to admit more or less light through the upper part of the window.

The invention consists in combining, with a peculiarly-constructed device of the sort, means hereinafter described, by which, when the roller is in any position, the lower part of the curtain may be rolled up, thus admitting light both above and below said roller. When the roller is at its highest point, the curtain may be entirely rolled up by the same means.

In the drawings accompanying and forming part of this specification, Figure 1 represents a front view of the invention attached to a window frame and curtain. Fig. 2 is a side view of the same. Fig. 3 is a side view of the swinging catch and ratchet-wheel, the bearing being broken away to show the same. Fig. 4 is a rear view of bearing, ratchet-wheel, and swinging catch, showing the pawl of the catch. Fig. 5 is a front view of the axis, showing the attachment of the different cords to the pulleys on the same.

In the accompanying drawings, A represents a window-frame of proper construction, of which *a a* are the jambs, *a'* the sill, and *a''* the top rail.

B is a curtain provided with the lower rod, *b*, and the upper rod or roller, *b'*, having on one end the pulley *b<sup>2</sup>*, provided with a cir-

cumferential groove, and on the other end the pulley *b<sup>3</sup>*, provided with two similar circumferential grooves.

C C are similar vertical guides or rings, fixed at equal heights in the upper part of the window-frame, at equal distances from the center of the same. The said ring must be situated above the highest point of the roller *b'*, one vertically over the groove in pulley *b<sup>2</sup>*, the other similarly over the inner groove of the roller *b<sup>3</sup>*.

D is a horizontal guide-ring, fixed in the central line of the window-frame horizontally between the rings C C.

E E are two opposite bearings, similar to curtain-rod bearings, standing out from the window-frame at a proper distance above the ring D, at equal distances on each side of the same.

F is an axis, each journal of which is supported by one of the bearings E. The said axis has fixed upon it within said bearings the three pulleys *f*, *f'*, and *f<sup>2</sup>*—*f* on the same side of the frame as the pulley *b<sup>2</sup>*, *f<sup>2</sup>* on the same side as the pulley *b<sup>3</sup>*, with the pulley *f'* between them.

*f<sup>3</sup>* is a ratchet-wheel fixed to the axis F, on the outer side or forming the outer side of the pulley *f<sup>2</sup>*.

H is a curved swinging catch pivoted at its upper end to the inner surface at the top of the bearing E, on the same side of the frame as the ratchet-wheel. The said catch curves from its pivot backward around the axis and forms the forward and upward projecting arm *h* in front of the same. The outer end of the arm is bent inward, so as to lie parallel to the frame A, and is provided with the opening *h'* for a purpose hereinafter mentioned.

*h<sup>2</sup>* is a projection bent inward at right angles from the rear edge of the back portion of the catch about its middle part, and which serves as a pawl to the ratchet-wheel. When the catch H is in its normal position, its weight causes the said projection to detain one of the teeth of the ratchet-wheel, and the arm *h* projects upward. When this arm is pulled down, the projection is swung out of position and the ratchet-wheel released.

I I are similar and equal ends of the cords, attached to the pulleys *f* and *f'* in such a manner that the revolution of the axis F in one

direction will roll or unroll both equally. The cords I I descend from the pulleys, pass through the horizontal ring D, thence through the rings C C, one on each side. Whenever

5 one passes around the groove in the pulley  $b^2$ , and the other around the inner groove in the pulley  $b^3$ , they then ascend, and are fastened to the shanks by which the rings C C are secured to the frame.

10 J is a cord fastened to the pulley  $f^2$  in such manner that unrolling it rolls up the cords I I or the reverse. The cord J passes from the pulley through the opening  $h'$  in the arm  $h$ , whence it hangs in front of the curtain, having

15 on its lower end a tassel or other proper hand-hold.

K is a cord attached to the outer groove in the pulley of the curtain-rod in such manner that unrolling it rolls up the curtain. This cord

20 is considerably longer than is necessary to roll up the whole curtain, and is provided on its lower end with a tassel or other proper hand-hold.

The operation of the device is as follows:

25 When it is desired to lower the roller  $b'$ , the cord J is pushed in toward the curtain sufficiently to depress the arm  $h$  by the hold the said cord takes within the opening  $h'$ . This releases the pawl  $h^2$  from the ratchet-wheel, and

30 as the cord is not pulled down the weight of the roller, with attached curtain, is sufficient to unroll the cords I I and revolve the axis F, the cord J being permitted to slip up just sufficiently to prevent the rise of arm  $h$ . As the

35 cords I I unroll, the roller  $b'$  descends, and as the pulleys  $b^2$  and  $b^3$  engage the loops of said cords the roller is revolved inwardly and the curtain is rolled upon the same. As the rolling equals the descent, the rod  $b$  remains nearly

40 stationary. By releasing the cord J the arm  $h'$  assumes its normal position and the roller

$b'$  becomes stationary at any desired point. Should it then be desired to admit light both above and below the curtain, the latter is rolled up to any desired distance by pulling down the

45 cord K. By pulling down the cord J the axis F is revolved in the opposite direction from the above, which reverses the action of the roller  $b'$  and cords I I, and the said roller consequently ascends, unrolling as it goes up.

50

When the curtain covers the window, it may be entirely rolled up by means of the cord K.

It is manifest that where so desired the guides C C and D, instead of being made in the ring form shown, may be pulleys, and that such

55 change would not involve a departure from the broad principles of my invention.

In use it will be understood that the friction of the cords I on rollers  $b^2$  and  $b^3$  is sufficient to prevent said rollers unwinding by the weight

60 of the curtain.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In combination with a window-frame, A, 65 and a curtain, B, provided with the lower rod,  $b$ , and upper roller,  $b'$ , having on its ends the pulleys  $b^2$  and  $b^3$ , the guides C C and D, fixed at proper points on said frame, the axis F, turning in the bearings E E, and provided with

70 the pulleys  $f f'$   $f^2$  and the ratchet-wheel  $f^3$ , the swinging catch H, provided with the pawl  $h^2$  and arm  $h$ , having the opening  $h'$ , and the cords I I, J, and K, all constructed and arranged as shown and described, for the pur-

75 poses specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. LINCH.

Witnesses:

ENFIELD W. ELLIS,  
S. F. COCHRAN.