(No Model.)

J. A. ILLINGWORTH.

CURTAIN FIXTURE.

No. 315,789. Patented Apr. 14, 1885.

Fig. 1.

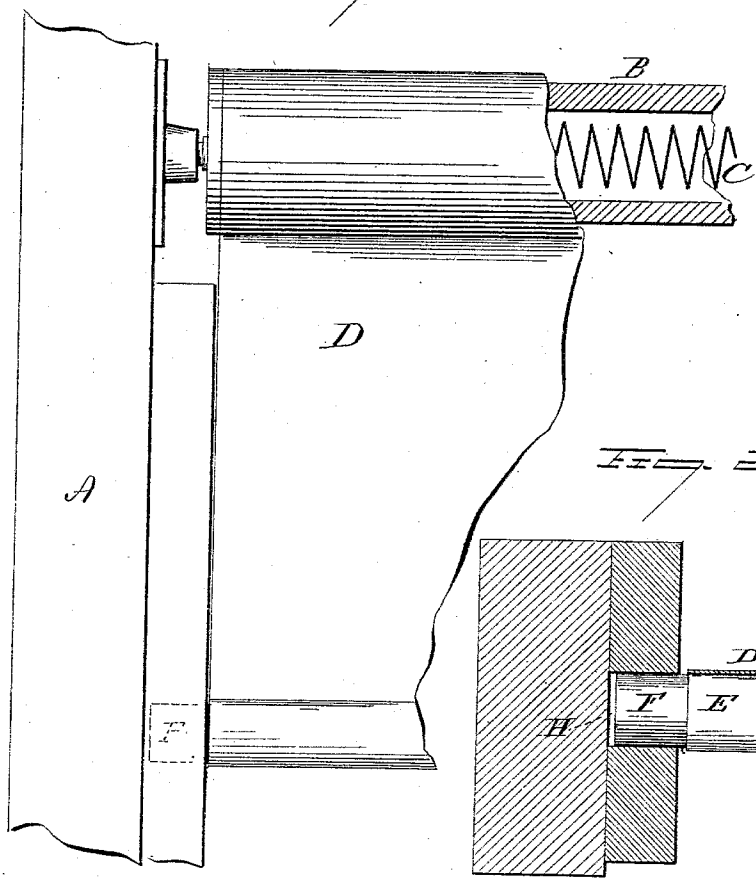


Fig. 2.

Fig. 3.

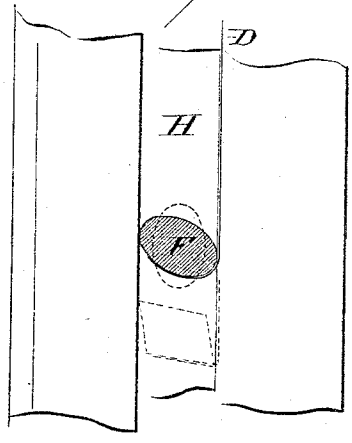
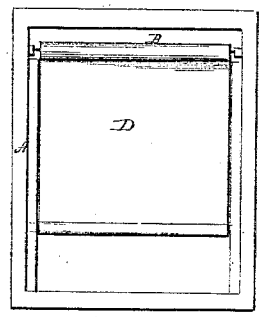


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 315,789, dated April 14, 1885.

Application filed October 6, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. ILLINGWORTH, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Curtain-Fixtures; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a face view of a portion of the shade as hung in the jamb, full size; Fig. 2, a transverse section through the jamb and shade, showing one of the trunnions in the groove of the jamb; Fig. 3, a side view of the jamb, showing the groove with the trunnion therein; Fig. 4, a face view of a window having the shade applied, on a reduced scale.

This invention relates to an improvement in that class of curtain-fixtures in which the shade is arranged upon a roll provided with a spring to automatically wind the shade upon the roll.

In the more general construction of this class of fixtures a catch of some character is provided at or in the roll to automatically engage the roll with a fixed portion, so as to prevent the rotation of the roll in order that the shade may stand at a given position, and so that when it is desired to wind the shade upon the roll such engagement is broken either by permitting a rapid rotation of the roll or by mechanically releasing such engagement.

In some cases, as in car-windows, a bar has been arranged in the lower end of the shade to extend at each end into a vertical groove in the jamb, the said groove provided with notches, which at certain points will engage the ends of the bar and hold the shade against the reaction of the spring; but in order to raise the shade the ends of the bar must be released from the notches and held therefrom while the shade is moving.

While either of these devices seem simple in themselves, considerable difficulty is experienced in manipulating such shades by persons not familiar with them.

The object of my invention is the construction of a device which will hold a spring-shade at any desired position of elevation, and yet which may be manipulated by any person having the capacity or intelligence to simply raise or pull down the shade; and it consists in providing the lower end of the shade with a bar extending out each side beyond the edge of the shade into vertical grooves in the jamb, the width of the extensions of the bar somewhat greater than the width of the grooves in the jamb, the shade attached to one side of the bar, so that as it is drawn upon by the spring in the roll such spring will have a tendency to rotate the rod and cramp the extensions in the grooves, as more fully hereinafter described.

A represents one jamb of a window; B, the roll hung in bearings in the jambs in the usual manner, and provided with a spring, C, in the usual manner of arranging a spring in a shade-roll, and so that the turning of the roll in one direction will wind the spring; then, when free, the reaction of the spring will turn the roll in the opposite direction.

D is the shade, one end of which is attached to the roll, and so that in pulling down the shade the spring will be wound, and the reaction of the spring will wind the shade upon the roll—a common and well-known construction, too well known to require detailed description. In the lower end of the shade a bar, E, is arranged. At each end of the bar is a trunnion-like extension, F, which projects beyond the edge of the shade. On the jamb a straight vertical groove, H, is made. The extensions or trunnions F are in width slightly greater than the width of the groove H in the jambs, but in thickness less than the width of the groove, and are preferably made of elliptical shape, as shown.

The shade D is attached to one edge or side of the bar E, and so that the greatest width of the trunnion will be substantially across the groove in the jambs, and as seen in Fig. 3. Thus arranged the lifting action of the spring upon the shade tends to turn the edge of the bar to which the shade is attached upward, and which action brings the trunnions F into a cramping position against the opposite edges of the groove, and, as seen in Fig. 3, producing sufficient friction thereon to overcome the power of the spring; hence the shade will stand wherever this cramping action of the trunnions occurs; but this friction is not so great as to prevent the movement of the bar

up or down in the groove if the person adjusting the shade apply a force thereto greater than the friction in the groove. When, however, it is desirable to adjust the shade, the bar E should be turned to bring the narrower width or diameter of the trunnions across the groove, as indicated in broken lines, Fig. 3. Then the shade may be moved with perfect freedom; but it will be necessary that the person so adjusting the shade hold the trunnions in this free position until the shade reaches its required elevation, for so soon as the bar is free it will, by its own gravity, turn to bring the trunnions again into the cramping position—that is to say, the bar, being held by one edge of the shade the other edge free, will fall toward the opposite edge of the jamb and bring the two edges or longer extremes of the trunnions against the opposite sides of the grooves, and to so engage the said sides as to prevent further upward movement of the shade under the action of the spring. By this construction the shade is readily held at any position to which it may be desired to adjust it, and is easily moved up or down by giving to the bar a partial rotation, and yet may be moved up or down without such rotation, so that, while the person understanding its manipulation may easily adjust the shade, the person who knows nothing of its peculiarities further than to take hold of the bar to raise or lower the shade may adjust it.

While I prefer the elliptical shape of the trunnions which I have described, any shape may be employed which will produce the cramping effect under the pull of the shade upon the edge of the bar in line with the greatest diameter or width of the trunnions, as indicated in broken lines, Fig. 3, and whereby the rotative action is produced upon the bar by the pull of the shade, the shade being attached to one edge of the bar and so that the pull of the shade thereon will produce a cramping action in the groove.

I claim—

The combination of a spring shade-roll, a shade one edge of which is attached to said roll, a bar in the free end of said shade constructed with an extension at each side the shade to form trunnions F, and a groove in each jamb into which said trunnions extend, said trunnions in width between opposite bearing-points greater than the width of the groove, but at other points narrower than the groove, the said shade attached to one edge of the bar and in line with the greatest width of the trunnions, substantially as described.

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