E. T. HIGHAM.

Curtain Roller and Bracket.

No. 207,965. Patented Sept. 10, 1878.

FIG. 1.

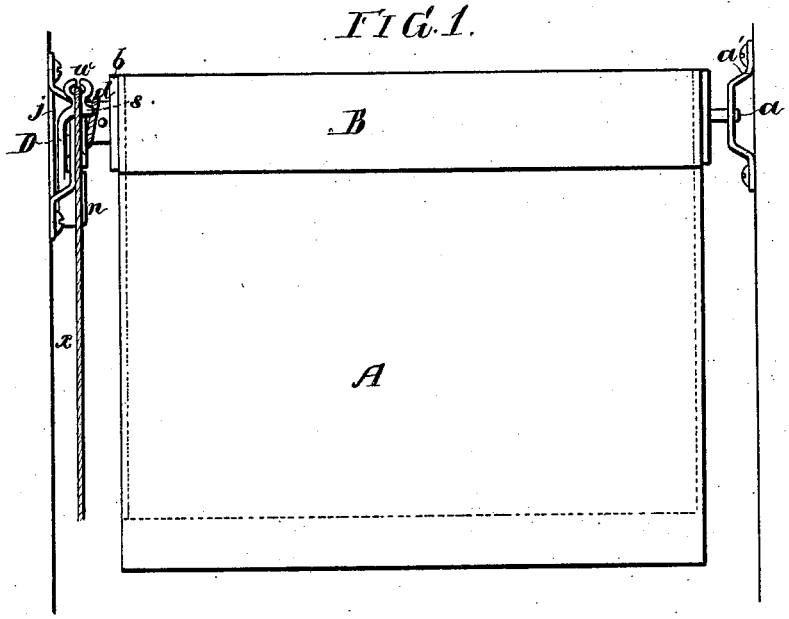


FIG. 4.

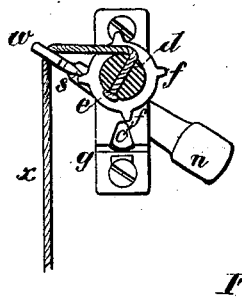


FIG. 5.

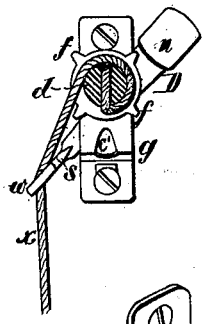


FIG. 3.

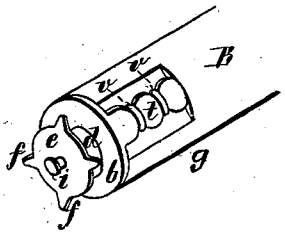


FIG. 6

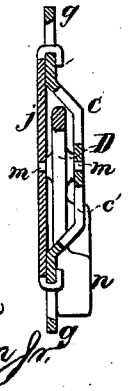
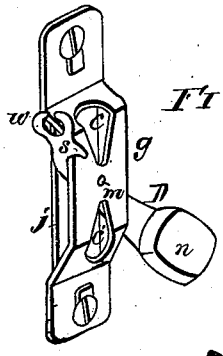


FIG. 2.



Witnesses,
Harry Smith
Henry Howson Jr.

Inventor,
Enos T. Higham
by his Attorneys
Howson and Son

UNITED STATES PATENT OFFICE.

ENOS T. HIGHAM, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO HOWARD H. HIGHAM, OF SAME PLACE.

IMPROVEMENT IN CURTAIN-ROLLER AND BRACKET.

Specification forming part of Letters Patent No. **207,965**, dated September 10, 1878; application filed March 21, 1878.

To all whom it may concern:

Be it known that I, ENOS T. HIGHAM, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Window-Shade Fixtures, of which the following is a specification:

My invention relates to an improvement in that class of curtain-fixtures in which the raising or lowering of the curtain is effected by the operation of a single pendent cord, the object of my invention being to construct a simple and effective fixture of this class. This object I attain in the following manner, reference being had to the accompanying drawing, in which—

Figure 1 is a front view of a window-shade provided with my improved fixture; Fig. 2, a perspective view of the latter; Fig. 3, a perspective view of that end of the curtain-roller adjacent to the improved fixture; Figs. 4 and 5, diagrams illustrating the operation of the device, and Fig. 6 an enlarged view, illustrating the construction of the body of the fixture.

A is the curtain, which is weighted at the bottom, and wound at the top upon the roller B, the latter having at one end a plain journal, *a*, adapted to an opening in the usual bearing-plate *a'*, secured to one of the side frames of the window. To the opposite end of the roller is secured, in the manner described hereinafter, a circular plate or disk, *b*, from which projects a hub, *d*, having an enlarged head, *e*, on the periphery of which are formed in the present instance four projections or prongs, *f*, a journal, *i*, projecting from the head *e*, and being adapted to a slot, *c*, near the upper end of a bent plate, *g*, which is secured to the side frame of the window. Near the lower end of the plate *g* is a slot, *c'*, similar to the slot *c*, so that the said plate *g* can be applied either to the right or left side frame of the window without interfering with the proper operation of the lever described hereinafter.

In the plate *g*, below the slot *c*, is an opening, which forms a bearing for one end of a short spindle, *m*, the opposite end of which has its bearing in a plate, *j*, secured to the back of the plate *g* by means of prongs, which pass through openings in said plate *g*, and are bent down on the outside of the same. The spindle *m* carries a lever, D, the outer end of which is provided with a weight, *n*, while its inner end has formed on it a projecting lug, *s*, and an eye, *w*, through which passes the cord *x*, by which the curtain is operated, the said cord being wound around the hub *d*. The ring which forms the eye *w* is split at the top, as shown in Figs. 1 and 2, so that the cord *x* can be readily introduced into or removed from the eye when necessary.

Owing to the size of the hub *d* and its head *e*, it would be difficult to secure the plate *b* to the end of the roller by means of pins driven longitudinally through the plate and into the end of the roller, as usual; hence I provide the plate *b* with two projecting arms, *t*, and cut away the end of the roller so as to form flat surfaces or ledges *y*, to which the arms are adapted, and to which they are secured by means of tacks or staples *v*, the edges of the arms *t* being recessed at the points where the tacks or staples are applied, so as to prevent longitudinal movement of the plate *b*.

The operation of the above-described device is as follows: When the curtain is at rest the parts are in the position shown in Fig. 4, one of the prongs *f* of the plate *e* bearing against the lug *s* of the lever D, and the latter bearing against the plate *g*, so that the roller B is held in position and prevented from being turned by the pull of the weighted curtain or shade. When it is desired to raise or lower the shade the cord *x* is pulled downward, so as to depress the inner end of the lever D.

Owing to the fact that the lever is hung at a point below the journal *i* of the roller, the said inner end of the lever will move in a course eccentric in respect to the hub *d* and its head *e*, so that when the outer end of the lever is depressed, as shown in Fig. 5, its lug *s* is clear of the prongs *f*, and the roller is free to turn. By slackening the cord *x* slightly, the roller will turn in one direction, so as to permit the shade to unwind, which it will readily do, owing to its weighted lower end, while by pulling upon the cord *x* the roller may be turned in the opposite direction, so as to wind up the shade, and these movements will be permitted as long as sufficient tension is kept upon the the cord *x* to maintain the lever D in the position shown in Fig. 5. When the curtain has

been raised or lowered to the desired extent, the tension upon the cord *x* is suddenly removed, so that the weighted outer end of the lever D descends and causes the elevation of its inner end to the position shown in Fig. 4, when the lug *s* comes into contact with one of the prongs *f* of the plate *e* and locks the roller in position.

It will be observed that the pull of the cord *x* upon the lever D is a direct downward one, and that the weighted end *n* of said lever always exerts its full force in restoring the lug *s* to a position in gear with the prongs *f*, so that the proper and rapid action of the device is insured.

I claim as my invention—

1. The combination of the roller B, the hub *d*, and the prongs *f*, the lever D hung eccentrically in respect to the roller, and having the weighted end *n*, eye *w*, and lug *s*, and the plate *g*, forming a bearing for the lever, and having two openings, *c c'*, one above and the other below the pivot of the lever, all substantially as set forth.

2. The combination of the lever D and its spindle *m* with the plate *g* and the rear plate *j* secured to said plate *g*, all substantially as set forth.

3. The combination of the roller B, having ledges *y*, with the plate *b*, its arms *t*, having recessed edges, and the tacks or staples *v*, as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ENOS T. HIGHAM.

Witnesses:
HARRY A. CRAWFORD,
HARRY SMITH.