

E. C. BYAM.
CURTAIN-CORD TIGHTENER.

No. 192,974.

Patented July 10, 1877.

Fig. 1.

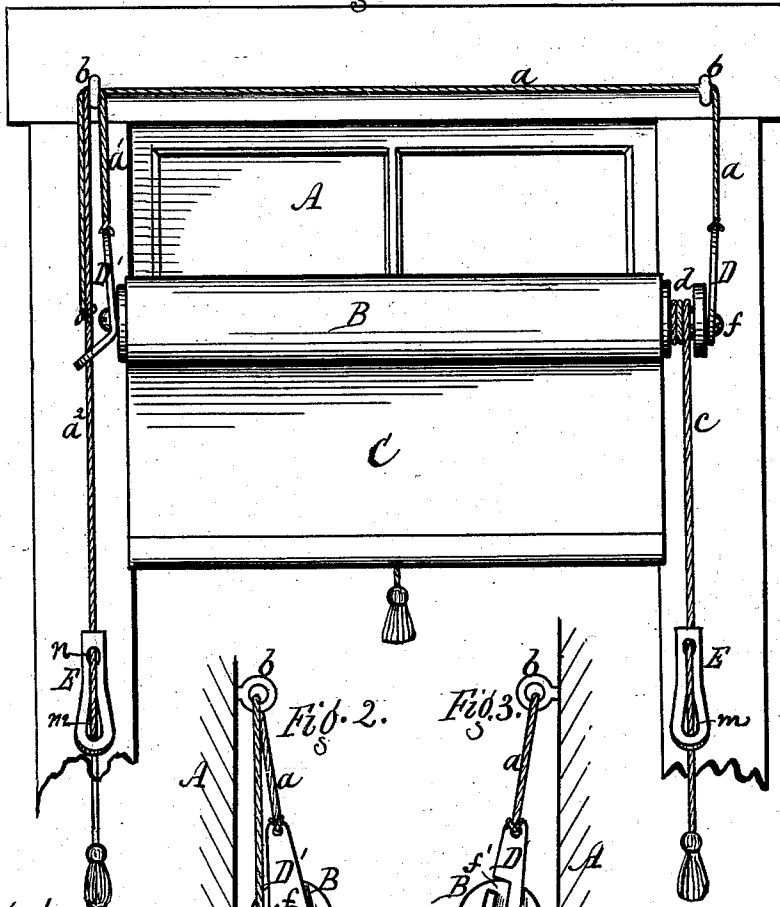


Fig. 4.

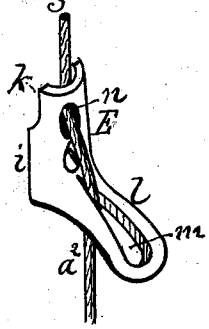


Fig. 2.

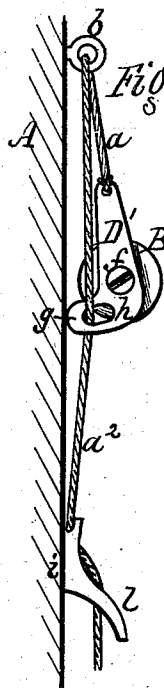


Fig. 3.

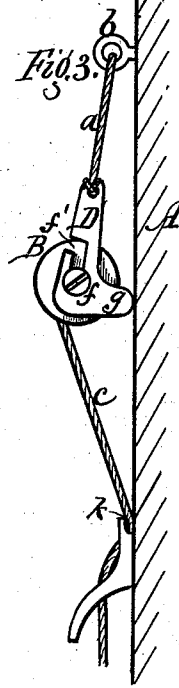
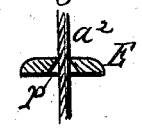


Fig. 5.



Attest.
Jacob Spahn
R. E. White

Inventor.
Eberle Byam
per R. L. Osgood
attys.

UNITED STATES PATENT OFFICE.

EBER C. BYAM, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN CURTAIN-CORD TIGHTENERS.

Specification forming part of Letters Patent No. 192,974, dated July 10, 1877; application filed April 9, 1877.

To all whom it may concern:

Be it known that I, EBER C. BYAM, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Curtain-Fixtures; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of a window, showing my improvement applied thereto. Figs. 2 and 3 are side views, showing the two ends of the roller and their connecting parts. Fig. 4 is a perspective view of one of the cord-holders. Fig. 5 is a cross-section of the same.

My improvement relates to balanced curtains, also to curtains which are adjustable bodily to different positions over the window to shade any portion desired.

The invention consists in the combination and arrangements of parts hereinafter more fully described and definitely claimed.

A represents the window. B is the curtain-roller, and C is the curtain. The curtain-roller is suspended by two cords, $a a^1$, at opposite ends, which pass up through eyebolts $b b$, or over suitable pulleys or other bearings. The cord a , after it has passed through the eyebolt, is carried horizontally across the window and passed through the eyebolt on the other side, and here the two cords are attached together or formed into one length, a^2 , which passes down within reach of the operator. By seizing this end he can raise or lower the curtain-roller bodily to any position, and the curtain can thus be made to shade any part of the window. The drawing shows the roller as being let down a little below the top of the window, and the curtain as being partially unrolled. The eyebolts may be placed either on the outside or the inside of the window-casing, as necessity may require.

c is the cord for rolling and unrolling the curtain. It winds upon the spool d , which may either be turned from the body of the roller, or made of metal and attached to the roller.

D and D' are the two bearings at the opposite ends of the roller, which sustain the roller, and are connected with the cords $a a^1$, so as to be drawn up and let down. The con-

nection with the roller is made by headed screws $f f$, which pass through holes in the bearings into the ends of the roller. In the right-hand bearing D a bayonet-slot, f' , is formed, connecting with the screw hole or socket, and opening outward at the front edge, so that the roller-journal may be inserted or removed without withdrawing the screw from the end of the roller. Each of these bearings D D' has a lug, g , projecting from its back side, which rests and bears against the window-casing, and serves as a guide to throw the curtain-roller out or away from the window, as shown in Figs. 2 and 3. The projection is but slight, as the design is simply to keep the roller from rubbing as it passes up and down. The bearing D' on the left-hand side of the window has a slot, h , through which passes the cord a^2 .

E E are catches on opposite sides of the window, which serve to receive and hold the cords $a^2 c$. These catches are of peculiar construction. They have a base portion, i , which rests against the wall, and is secured thereto by a screw. The top of this base portion is notched at the top, as shown at k , leaving a space between it and the wall to receive the cord, and the top is curved to retain the cord in position, as indicated in Fig. 4. The lower portion l is carried outward and downward, and in this is made a wedge-shaped, elongated opening, m , large at the outer end and contracted to a point at the inner end. The slot on the under side is beveled from the top downward, as shown at p in the cross-section, Fig. 5, by which means the cord a^2 , which rests therein, is prevented from being cut or abraded when drawn upward by the weight of the roller. The catches also have a hole, n , near the top. The cord a^2 passes downward into the notch k , thence outward through the hole n , and thence down vertically through the slot m , as clearly shown.

The operation is as follows: To raise or lower the curtain-roller the cord a^2 is seized by the operator below the catch E and drawn outward from its hold in the slot m , and then drawn down, or allowed to rise, as the case may be. When the roller is in proper position the cord is dropped and re-engages with the slot automatically, by having a weighted tassel

at the end, which draws it into the narrow end of the slot *m*. The beveled bottom *p* prevents cutting or wearing of the cord when it engages, as before described. The drawing of the cord into the slot is assisted by the backward passage of the cord through the hole *n*, making a sharp turn just above the slot. The other cord *c* for rolling and unrolling the curtain is operated in the same manner, automatically re-engaging when dropped by the operator.

When the spool and bearings at the ends of the roller are made of metal the journals may be cast solid with said bearings, and be used in place of the screws *f f*, before described. Also, in large windows reaching to the floor, the cord *c* may be looped up or hung to hooks attached to the casing, to prevent it from resting on the floor when the roller is lowered. The edge of the bearing *D*, may also be turned inward over the edge of the spool *d* to prevent the cord from running off by reason of its angular position in connecting with the catch *E*.

I do not claim, broadly, a cord-holder of angular form, standing outward, and provided

with a wedge-shaped slot to retain the cord; neither do I claim, broadly, a hanger having a foot or bearing resting against the casing; but

I claim—

In a curtain fixture sustained by cords *a a'*, the angular holder *E*, constructed at its top with the notched offset *k*, with a semicircular opening in the back to admit the cord, a hole, *n*, to allow the cord to pass outward, and a wedge-shaped slot, *m*, in the lower projecting portion, with its angular end standing upward to allow the cord to pass downward through the same, the whole arranged as set forth, so that the cord forms a friction-loop on the outside of the holder and engages with the slot by its own weight, as shown and described, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EBER C. BYAM.

Witnesses:

R. F. OSGOOD,
J. N. COLE.