Aug. 28, 1962 H. D. HULTERSTRUM 3,050,803

PLASTIC OPERATOR FOR DRAPERY CORD

Filed March 14, 1960

Fig. 1

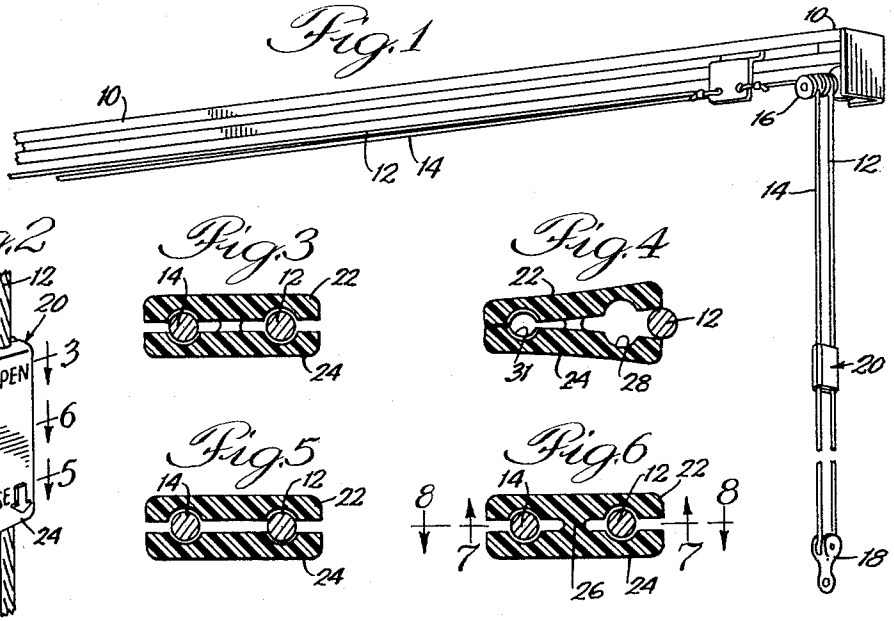


Fig. 2

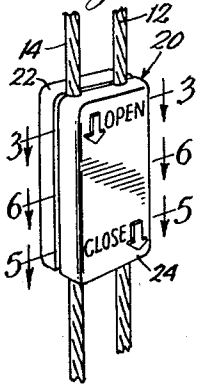


Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

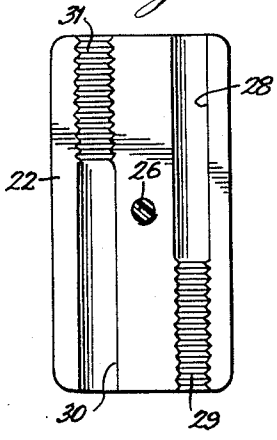


Fig. 8

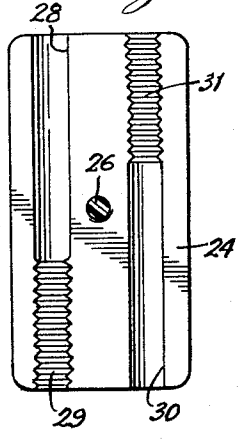
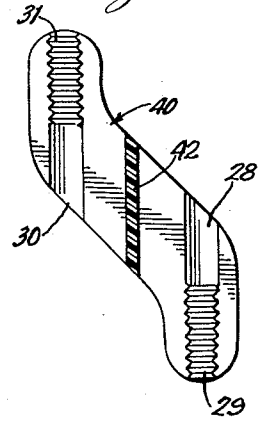


Fig. 9



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PLASTIC OPERATOR FOR DRAPERY CORD

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1 Claim. (Cl. 24—129)

This invention relates to an actuating device for pulley cords and finds particular application in conjunction with draperies used for window coverings in the home or office. In draw draperies it is customary to have two cords hanging from the drapery rod. When one cord is pulled, the draperies open, and when the other cord is pulled, the draperies close. Usually when the draperies are opened there is a surplus of cord piled up on the floor, especially where the window being covered by the draperies is very wide. In such case it has been customary in the past to make the cord continuous and train it around a pulley secured to or near the floor. This construction is used on the drawing mechanism for theater curtains.

The present invention is intended for use on drapery cords which are mounted in such a continuous manner. The actuator of the invention is adapted to embrace both cords in sliding engagement. By applying manual pressure to one end of the actuator, the first of the cords is gripped and the curtain is opened when the actuator is pulled down. By applying manual pressure to the other end of the actuator, the second cord is gripped to facilitate closing the curtain. In each instance, upon application of pressure one only of the cords is gripped by the actuator. The other slides freely therethrough. When the pressure on the actuator is released, the actuator may be moved freely on both cords in an upward direction to begin a new downstroke in the opening or closing operation.

The primary object of the present invention is to provide an actuator of the type described which is low in cost and preferably molded in a single piece from tough, resilient resin.

Another object is to provide an actuator of this type which is so designed that the drapery may be opened or closed without making a visual examination of the cords or the actuator to determine which cord to pull.

Another object is to provide an actuator which may be installed or removed from the drapery cords without removing the end of one cord from the drapery rod.

These and other objects and advantages will become apparent from the following description when read in conjunction with the accompanying drawing, in which:

FIGURE 1 is a perspective view of a drapery rod partly broken away showing the cord arrangement for drawing draperies mounted on the rod;

FIGURE 2 is a perspective view of the actuator of the invention mounted on a pair of pulling cords;

FIGURE 3 is a sectional view taken along the line 3—3 of FIGURE 2;

FIGURE 4 is a view similar to FIGURE 3 showing how the blocks which comprise the actuator may be flexed to permit insertion of the cord;

FIGURE 5 is a sectional view taken along the line 5—5 of FIGURE 2;

FIGURE 6 is a sectional view taken along the line 6—6 of FIGURE 2 showing the hinge connection between the opposed blocks comprising the actuator;

FIGURE 7 is a view taken along the line 7—7 of FIGURE 6;

FIGURE 8 is a sectional view taken along the line 8—8 of FIGURE 6; and

FIGURE 9 is a view similar to FIGURE 7 showing an alternative form of construction in which the outline shape of the actuator has been modified.

The drapery rod structure, of conventional design, is designated generally at 10 and includes a pair of cords 12, 14 trained over pulleys 16 at one end of the rod and which form a continuous loop about the pulley 18 which is secured to the floor below the rod. The actuator of the invention is designated generally by the numeral 20 and is adapted to embrace the cords 12, 14 as shown in FIGURE 1. The actuator 20 consists essentially of two blocks 22, 24 which may be rectangular in shape, as indicated in FIGURES 2 through 8. The blocks are interconnected by means of a central web-like member 26 which may be round in cross section, as indicated in the drawing, or of any other suitable shape. It is essential only that the web be large enough to secure the blocks in opposed relation and at the same time permit flexing of the blocks about the entire periphery of the actuator. On either side of the web hinge 26 I have provided channels 28, 30 which are parallel to each other and run longitudinally of the actuator. The channel 30 has gripping projections or ribs 31 which resemble threads projecting from the inner surface thereof near the top of the actuator. It will be noted that the ribs run from the top opening of the channel 30 to a point spaced slightly above the midpoint of the actuator. Similar ribs or threads 29 project from the inner surface of the channel 28. It will be noted, however, that the ribs 29 are disposed in the lower end of the channel 28 and extend from the opening in the lower end of the actuator to a point somewhat below the midpoint thereof. The ribs 29, 31 may be replaced by knurling or any other suitable gripping surface.

The longitudinal channels 28 and 30 are formed in the opposed inner surfaces of the blocks 22, 24. The arcuate depressions in the surface of the blocks which form the channels are not full semi-circles in cross section due to the fact that the blocks are spaced by the hinge web 26. However, the opposed arcuate depressions together with the space between the blocks define a channel which is essentially circular in cross section so that it will embrace the circular cords 12 and 14 rather closely. The openings 28 and 30 are sufficiently large so that the actuator will slide up and down on the cords freely when moved manually, but snug enough to prevent sliding down by gravity alone. The primary means for providing friction between the actuator and the cords are the respective ribs 29, 31 or similar roughened surfaces.

The actuator comprising the opposed blocks 22, 24 interconnected by the web 26 is preferably molded from one piece of resilient thermoplastic resinous material such as linear polyethylene, high impact polystyrene, nylon or similar material which is tough, horny, and somewhat elastic. By reason of these properties the edges of the blocks 22, 24 comprising the actuator may be flexed toward and away from each other about the web hinge 26. This flexing movement is possible around the entire periphery of the actuator since the web 26 is centrally disposed both with respect to the length and the width of the actuator. The construction, therefore, facilitates insertion of the cord without disconnecting the cord from the drapery rod to which it is connected. By distending the opposed faces of the blocks 22, 24 as indicated in FIGURE 4, the cord may be pushed into the opening 28, or 30. The actuator may be removed from the cords in exactly the same way.

The elastic or resilient property of the plastic from which the actuator is made is also utilized in operation of the actuator device itself. Referring to FIGURE 2, it will be noted that the upper portion of the actuator has been labeled "Open" while the lower portion has been labeled "Closed." By applying manual pressure to the upper portion of the actuator, approximately in the area labeled "Open," the cord 14 disposed within the

channel 30 is gripped by the ribs or threads 31 projecting from the inner surface of that channel. Thus, when the actuator is moved downwardly while being compressed in this area, the cord 14 moves downwardly to open the draperies. When the pressure is released, the actuator may be moved upwardly on the cord without changing the position of the cord with respect to the traverse rod. To move the cord 12 and thus close the draperies, pressure is applied to the lower portion of the actuator 20 which causes the ribs 29 to grip the surface of the cord 12. Thus, while the pressure is applied the actuator is moved downwardly to advance the cord 12 in that direction and close the draperies. It will be appreciated that it is not necessary to experiment to determine which of the cords must be pulled. Once the operator knows that the top of the actuator is squeezed to open the drapery and the bottom is squeezed to close it, the drapery may be opened or closed merely by reaching in behind the drapery and gripping the actuator in the appropriate place.

In FIGURE 9 I have shown an alternative configuration for the actuator. The blocks comprising the device are roughly S-shaped instead of rectangular. The web 42 which interconnects the opposed blocks comprising the actuator 40 is elongated and disposed midway between the openings 28, 30 and in parallel relation therewith. This outline shape permits the operator to determine more readily which portion of the actuator must be pressed in order to open or close the draperies. The portion which projects upwardly is for opening the drapery since persons familiar with ordinary window shades of the roll type are used to having the curtain opened when it is raised. Similarly, the draperies may be closed by pressing the portion of the actuator which extends in the downward direction since by analogy to the roll shade, closing is effected by pulling it down.

Other modifications will occur to those skilled in the art. It is, therefore, my intention to cover any such modifications which are reasonably included within the scope of the appended claim.

What I claim as new and desire to secure by Letters Patent of the United States is:

An actuator for a pair of pulley cords comprising a pair of generally flat blocks of resilient material connected to each other with their flat faces in spaced parallel relation by means of a central web, the peripheral edges of said blocks around said web being free to flex toward each other about said web, a first pulley cord channel on one side of said web and spaced laterally therefrom, a second pulley cord channel on the other side of said web and spaced laterally therefrom, each said channel being formed by a pair of complementary grooves in opposed faces of said blocks, said first channel having a series of internal gripping projections near one end of said actuator below said web and said second channel having a series of internal gripping projections near the other end of said actuator above said web, whereby a cord disposed within said internal gripping projections of said channels can be gripped by manually flexing said blocks toward each other.

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