Sept. 18, 1934. W. E. SHEHAN 1,973,933

CORD ANCHOR

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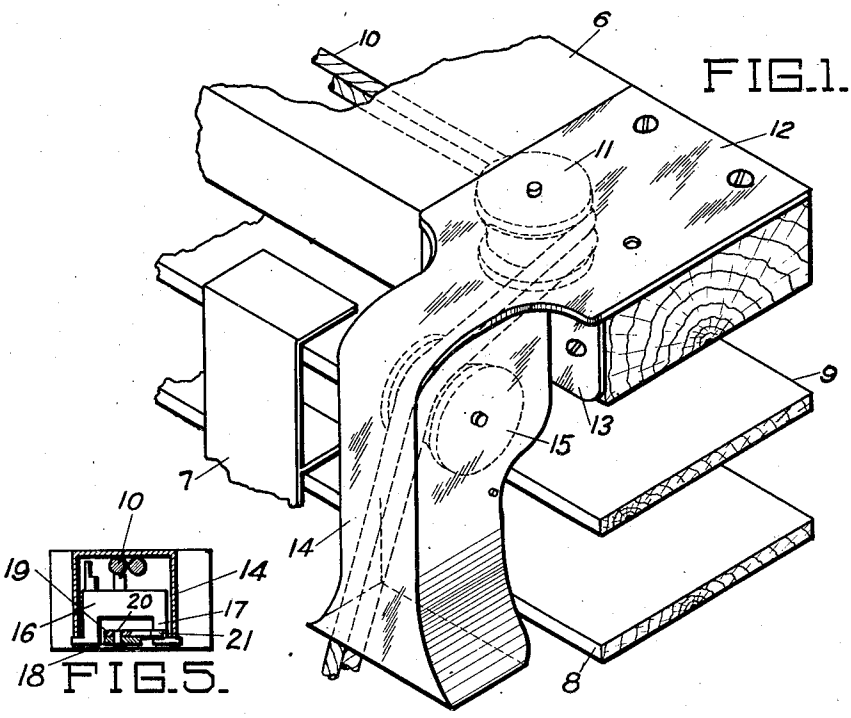


FIG. 1.

FIG. 5.

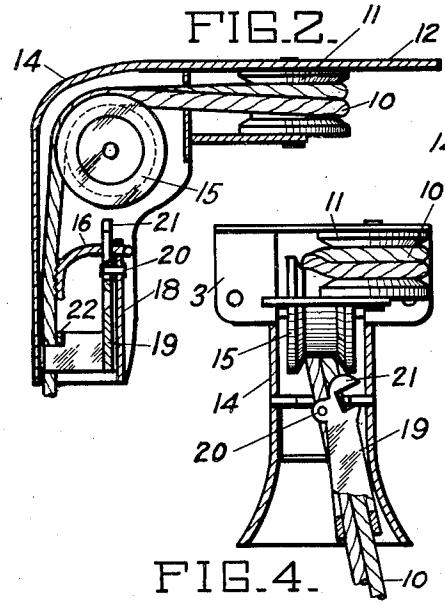


FIG. 2.

FIG. 4.

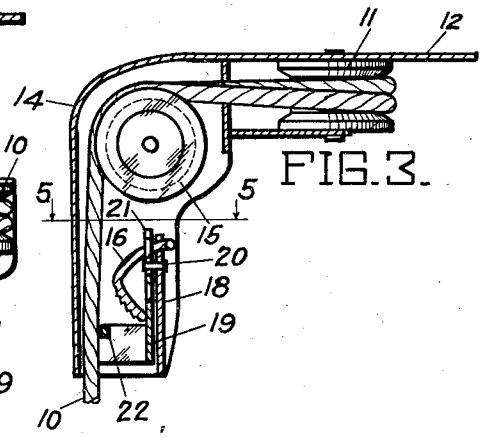


FIG. 3.

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CORD ANCHOR

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10 Claims. (Cl. 24—134)

This invention relates to a device for gripping travelling cords and the like by movement of the cord laterally. A field of use is that with Venetian blinds. In such blinds, a cord or cords are provided for raising and lowering the blind. Such cords are commonly fastened to the lower slat of the blind, pass upwardly to a top rail on which the cords are supported and are guided by pulleys to a position where they have dependent ends conveniently disposed for grasping by a person. By pulling upon the cords, the blind may be raised. It has been common practice to anchor the blind at a desired elevation by adjustably fastening the cord to cord fastener mounted on the window frame. Cord anchors have been provided wherein a lateral pull on the cord from its normal direction of travel will operate a cord grip mechanism to grip and hold the cords and a pull restoring the cord to its normal direction of travel will cause the grip to be released. Such anchors have had disadvantages. An anchor which is operated by pulling outwardly away from the blind requires a backward movement of the cord into a room and over a space of such extent as to make it objectionable. Furthermore, such cords are passed over pulleys having axes parallel to the blind and due to the inherent stiffness of such cords are subject to operating the grip when the weight of the blind is released in lowering and thereby automatically locking, requiring reactuation for release.

The present invention has for its object provision of an anchor operable by sidewise movement of the cord thereby overcoming the objections above mentioned and whereby a simple, durable, compact and easily operated structure is obtained.

These objects are accomplished by means of the embodiment of my invention illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of a fragment of a Venetian blind with a cord anchor in position and the parts in gripping position; Fig. 2 is a longitudinal section through the anchor with parts in cord gripping position; Fig. 3 is a view similar to Fig. 2 with parts in cord released position; Fig. 4 is rear elevation partly in section of the structure shown in Fig. 2; and Fig. 5 is a section as seen on the line 5—5 of Fig. 3.

Referring more particularly to the drawing, a Venetian blind top rail is denoted by 6. Straps 7 are suitably secured to the slats 8 and the header slat 9. The usual lifting cords 10, of which two are shown, are connected to the blind so that by pulling upon them the blind may be raised. These cords are housed in a channel in the top rail and pass about a sheave or pulley 11.

The pulley 11 may be journalled on a frame comprising a fastening plate 12 which merges into a channel portion 14 at the front. Flanges 13 at the rear side of said channel portion serve for further attachment to the top rail. Suitable screw holes in the fastening plate and flanges are provided so that the anchor may be secured to the top rail. Journalled between the legs of the channel is a cord guide or sheave 15 over which cords 10 are passed and depend. Pivotally mounted on an axis parallel to the axis of pulley 15 is a movable gripping jaw having a gripping face confronting the front wall of channel 14 and preferably serrated. The front wall of channel 14 constitutes a fixed jaw to coact with jaw 16. The gripping face of jaw 16 is eccentric to the pivotal axis so that when the jaw 16 is swung up, it will wedge cords 10 between the jaws, and an upward pull on the cords as that caused by the weight of the blind will increase the gripping action. It will be noted from Fig. 5 that the jaw 16 has arms 17. Extending across the back of channel 14 is a wall 18 serving as a bearing support for an actuator 19 which is pivotally secured thereto by a pin 20. The actuator extends above pin 20 and is extended laterally to provide a slotted arm 21 receiving an arm 17 of the jaw 16. At the free or lower end of the actuator, the cords 10 are confined by the rear and side walls of the actuator and a cross bar 22. Thus, the actuator is compelled to swing with lateral movement of the cords. The arms 21 and 17 serve as a motion transmission coupling and cause the jaw 16 to be swung with swinging movement of the actuator. Thus, when the cords are in the position shown in Figs. 1, 2, and 4, the actuator 19 is maintained at one side and the jaw 16 in cord gripping position. The weight of the blind maintains a pull on the cords and keeps them in tension to hold the jaw 16 in gripping position. It is preferable to position the actuator with respect to the jaw 16 so that a pull on the cord toward the center of the blind causes gripping. Obviously by reversing the position of the arm 21, the anchor may be caused to grip when the cords are swung in the opposite direction. Thus, the anchor may be accommodated to mounting on either side of the blind and to a pull in either direction. To release the grip, the cords are pulled straight down, the cords swinging from the way or groove in pulley 15.

It will be noted that the cords 10 pass over the way in guide pulley 15 in a direction such that

any stiffness in the cords at the bend tending to push outwardly on the actuator would have no effect on movement of the latter.

What I claim is:

1. A cord anchor comprising a frame, a cord supported by said frame and longitudinally movable in relation to itself, said cord being swingable from its support, a grip in said frame through which said cord passes; said grip including a jaw movable toward and away from said cord to grip and release the latter, an actuator for said jaw embracing said cord so as to be operable by lateral movement of said cord, said actuator having a path of movement transverse to the path of movement of said jaw, and motion transmission means coupling said actuator and jaw whereby movement of the actuator causes movement of said jaw.

2. A cord anchor comprising a frame, a cord guide in said frame having a way in which said cord travels over said guide and extends therefrom so as to be swingable laterally of said way, a grip in said frame through which said cord passes; said grip including a jaw movable toward and away from said cord to grip and release the latter, an actuator for said jaw embracing said cord so as to be operable by lateral movement of said cord, said actuator having a path of movement transverse to the path of movement of said jaw, and motion transmission means coupling said actuator and jaw whereby movement of the actuator causes movement of said jaw.

3. A cord anchor comprising a frame, a pulley journalled in said frame, a cord passing over said pulley and extending therefrom so as to be swingable laterally of the axis of said pulley, a grip in said frame through which said cord passes; said grip including a jaw movable toward and away from said cord to grip and release the latter, an actuator for said jaw embracing said cord so as to be operable by lateral movement of said cord, said actuator having a path of movement transverse to the path of movement of said jaw, and motion transmission means coupling said actuator and jaw whereby movement of the actuator causes movement of said jaw.

4. A cord anchor comprising a frame, a pulley journalled in said frame, a cord passing over said pulley and extending therefrom so as to be swingable laterally of the axis of said pulley, a grip in said frame through which said cord passes; said grip including a fixed jaw on said frame, a movable jaw, said cord passing between said jaws, an actuator for said movable jaw embracing said cord so as to be operable by lateral movement of said cord, said actuator having a path of movement transverse to the path of movement of said movable jaw, and motion transmission means coupling said actuator and said movable jaw whereby movement of the actuator causes movement of said movable jaw.

5. A cord anchor comprising a frame, a pulley journalled in said frame, a cord passing over said pulley and extending therefrom so as to be swingable laterally of the axis of said pulley, a grip through which said cord passes for gripping and releasing the latter; said grip including a fixed jaw on said frame, a movable jaw pivoted on said frame having a wedging face for co-operation with said fixed jaw, said cord passing between said jaws, an actuator for said movable jaw embracing said cord so as to be operable by lateral movement of said cord, said actuator having a path of movement transverse to the pivotal axis of said movable jaw, and motion transmission means coupling said actuator and movable jaw whereby movement of the actuator causes movement of said movable jaw.

6. A cord anchor comprising a frame, a cord supported by said frame and longitudinally movable in relation to itself, said cord being swingable from its support, a grip in said frame through which said cord passes; said grip including a jaw movable toward and away from said cord, an actuator for said jaw pivoted on said frame on an axis at right angles to the path of movement of the cord, said actuator adjacent its free end embracing said cord so as to be swung thereby, and an arm on said actuator coupled to said jaw for moving the latter.

7. A cord anchor comprising a frame, a cord guide in said frame having a way in which said cord travels over said guide and extends therefrom so as to be swingable laterally of said way, a grip in said frame through which said cord passes; said grip including a jaw movable toward and away from said cord to grip and release the latter, an actuator for said jaw pivoted on said frame on an axis parallel to the path of movement of said jaw, said actuator adjacent its free end embracing said cord so as to be swung thereby, and an arm on said actuator coupled to said jaw for moving the latter.

8. A cord anchor comprising a frame, a pulley journalled in said frame, a cord passing over said pulley and extending therefrom so as to be swingable laterally of the axis of said pulley, a grip in said frame through which said cord passes; said grip including a jaw movable toward and away from said cord to grip and release the latter, an actuator for said jaw pivoted on said frame on an axis parallel to the path of movement of said jaw, said actuator adjacent its free end embracing said cord so as to be swung thereby, and an arm on said actuator coupled to said jaw for moving the latter.

9. A cord anchor comprising a frame, a pulley journalled in said frame, a cord passing over said pulley and extending therefrom so as to be swingable laterally of the axis of said pulley, a grip in said frame through which said cord passes; said grip including a fixed jaw on said frame, a movable jaw in said frame, said cord passing between said jaws, an actuator for said movable jaw pivoted on said frame on an axis parallel to the path of movement of said movable jaw, said actuator adjacent its free end embracing said cord so as to be swung thereby, and an arm on said actuator coupled to said movable jaw for swinging the latter.

10. A cord anchor comprising a frame, a pulley journalled in said frame, a cord passing over said pulley and extending therefrom so as to be swingable laterally of the axis of said pulley, a grip through which said cord passes for gripping and releasing the latter; said grip including a fixed jaw on said frame, a movable jaw pivoted on said frame having a wedging face for cooperation with said fixed jaw, said cord passing between said jaws, an actuator for said movable jaw pivoted on said frame on an axis transverse to the pivotal axis of said movable jaw, said actuator adjacent its free end embracing said cord so as to be swung thereby, and an arm on said actuator coupled to said movable jaw for swinging the latter.

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