April 12, 1938. D. D. DARLING 2,113,933

OPERATING MECHANISM FOR VENETIAN BLINDS

Filed July 30, 1937

FIG. 1.

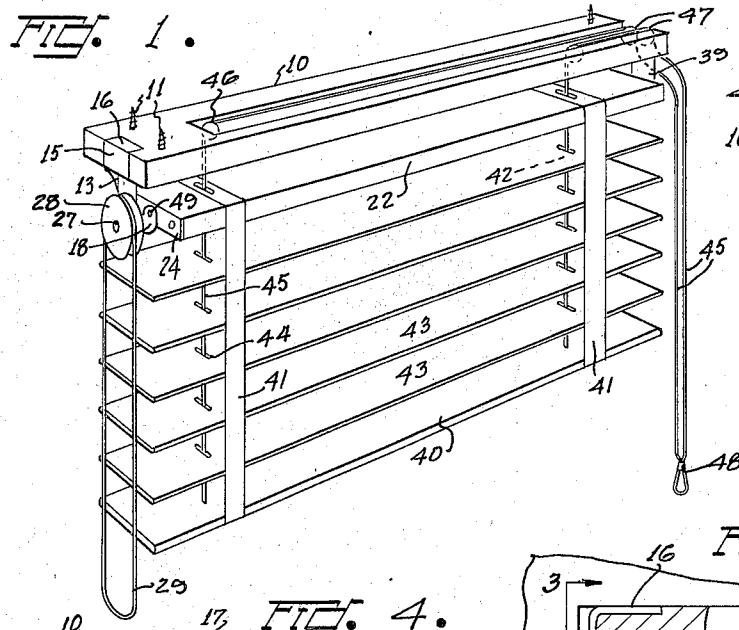


FIG. 3.

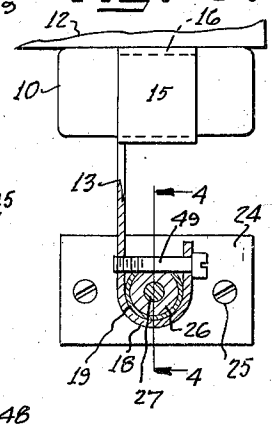


FIG. 2.

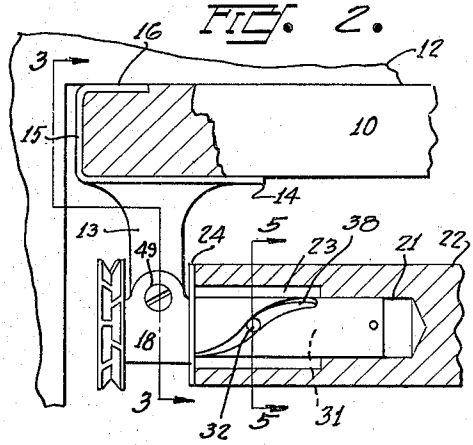


FIG. 4.

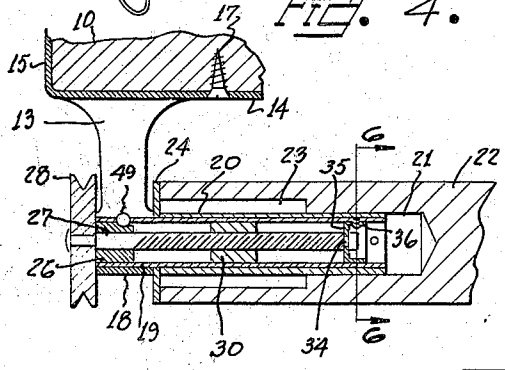


FIG. 6.

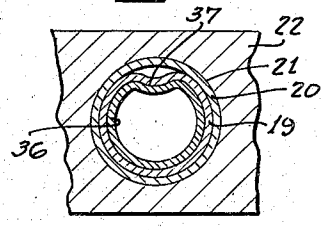
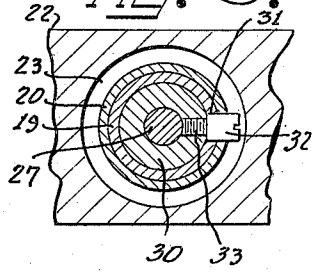


FIG. 5.



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OPERATING MECHANISM FOR VENETIAN BLINDS

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Application July 30, 1937, Serial No. 156,505

3 Claims. (Cl. 156—17)

This invention relates generally to a Venetian blind, and particularly to an operating mechanism therefor.

The main object of this invention is the provision of an exceedingly simple and efficient form of operating mechanism for a Venetian blind which will be inexpensive to manufacture, simple to install, positive in its operating and having the major portion of its parts concealed from view.

I accomplish this, and other objects, in the manner set forth in the following specification as illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of the complete blind.

Fig. 2 is a fragmentary front elevation of the device showing a portion of the tilting bar in section.

Fig. 3 is a section taken along the line 3—3 in Fig. 2.

Fig. 4 is a section taken along the line 4—4 in Fig. 3.

Fig. 5 is a section taken along the line 5—5 in Fig. 2.

Fig. 6 is a section taken along the line 6—6 in Fig. 4.

Similar numerals refer to similar parts throughout the several views.

Referring in detail to the drawing, there is shown a head bar 10 adapted to be attached preferably by screws 11 to the top 12 of the window frame. To one end of the head bar 10 is attached a hanger 13 whose portion 14 extends below the head bar 10 and whose portion 15 extends around the end of the head bar 10 while the portion 16 extends around the top of the head bar 10. The hanger 13 is attached to the head bar 10 by means of the screws 17. The lower end 18 of the hanger 13 is curled upwardly as shown in Fig. 3 to form a bearing for the tubular sleeve 19 which is fixedly mounted in the hanger 13. The sleeve 20 is rotatably mounted on the sleeve 19 which extends into the recess 21 in the tilting bar 22. The recess 21 is provided with a counter bore 23.

The sleeve 20 has formed on its outer end a flange 24 through which extend the screws 25 which fasten same to the tilting bar 22.

Within the sleeve 19 is disposed a bushing 26 in which journals the feed screw 27 on whose outer end is secured the pulley 28 which receives the endless cord 29. The screw 27 is preferably of the double thread type and extends through the cylindrical nut 30 which is slidable within the sleeve 19. The sleeve 19 has a straight slot 31 formed therein through which projects the head 32 of the screw 33 which is threaded radially into the nut 30. The end of the screw 27 which is opposite the bushing 26 is provided with a groove 34 which receives the slotted end 35 of the bushing 36. The bushing 36 is itself secured to the sleeve 19 by means of a center punch 37.

The sleeve 20 is provided with a spiral slot 38 into which projects the head 32 of the screw 33. The purpose of the counter bore 23 is to provide clearance for the head 32. A suitable hanger 39 is provided for the tilting bar 22 at the end opposite the pulley 28.

A bottom bar 40 is placed below the tilting bar 22 and is attached thereto by means of the ladder tape 41 on whose cross ties 42 are disposed the slats 43. The slats 43 are provided with slots 44 through which slidably pass the elevating cords 45 which pass around the pulleys 46 in the head bar 10 and then downwardly around the pulleys 47 to a hand grip 48.

Any of the various well known means for holding the blind at a desired elevation may be employed, but since this does not form a part of the present invention they will not be described in detail here.

The elevating cords 45 are secured at their lower ends to the bar 40.

Extending through the hanger 13 is a screw 49 which intersects the sleeve 19 and prevents its movement with relation to the hanger 13.

The operation of the device is as follows:

When it is desired to raise or lower the bottom bar 40, it is only necessary to operate the cords 45 by pulling on the hand grip 48.

When it is desired to rock the bottom bar 40 and the slats 43, it is only necessary to operate the cord 29 by pulling on same which action causes the pulley 28 to revolve and the screw 27 to rotate thereby causing the nut 30 to move longitudinally in the sleeve 19. Since the nut 30 carries the screw 33 and its projecting head 32 extends through the spiral slot 38 in the sleeve 20, it follows that the rotary motion of the pulley 28 will cause the tilting bar 22 to rock on its pivotal supporting sleeve 19. Obviously, any position to which the nut 30 is moved will bring about a corresponding tilting action of the bar 22.

I claim:

1. An operating mechanism of the class described consisting of a sleeve adapted to be mounted in the end of a tilting bar, said sleeve having a spiral slot formed along the length thereof, a second sleeve mounted in said first mentioned sleeve having a longitudinal slot formed therein

intersecting said spiral slot, means for holding said sleeve against rotation, a screw journaling in said second sleeve having a driving pulley on the outer end thereof, a nut on said screw having a radial projection extending through said straight slot and into said spiral slot and means for rotating said driving pulley.

2. In a device of the class described, the combination of a tilting bar, a tubular sleeve mounted at the end of said bar and having a spiral slot formed therein, a second sleeve rotatably mounted in said first sleeve, said second sleeve having a straight slot formed therein, a support for said second sleeve, a double threaded screw journaling axially in said second sleeve, a nut on said screw slidably mounted in said second sleeve and having a projection thereon extending through said straight slot and into said spiral slot, said second sleeve having means for holding same in a fixed position while permitting said first mentioned sleeve to revolve.

3. In a device of the class described the combination of a hanger adapted to be secured to a head bar and having its lower end upturned to form a U-shaped bearing, a sleeve secured in said bearing having a straight slot along a portion of the length thereof, a screw extending through said U-shaped bearing and sleeve adapted to prevent the movement of said sleeve with relation to said bearing, journals formed at opposite ends of said sleeve, a screw rotatably mounted in said journals having a driving pulley at the outer end thereof and having a nut thereon between said journals, said nut having a radial projection extending through said straight slot and a spirally slotted sleeve rotatably mounted on said first mentioned sleeve and having the slot thereof engaging said projection and means for rotating said pulley for the purpose of rocking said tilting bar on its axis.

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