Feb. 16, 1932. C. D. AGEE 1,845,574

SLAT ADJUSTING DEVICE FOR LOUVER OR VENETIAN BLINDS

Filed May 14, 1931

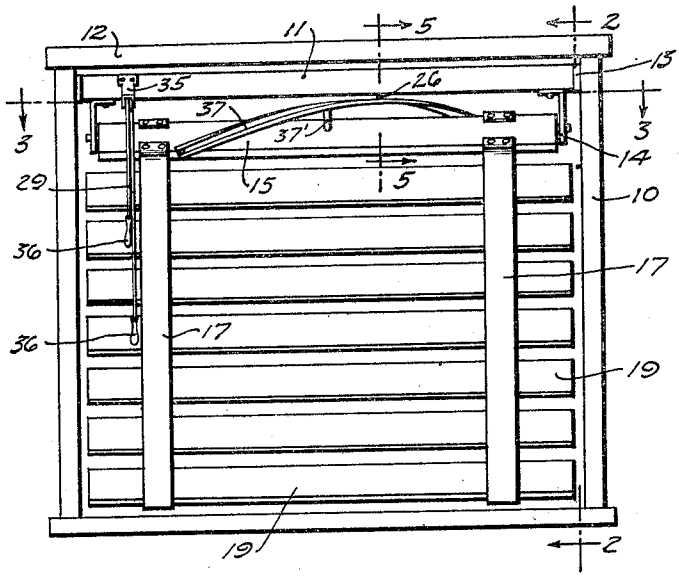


Fig. 1

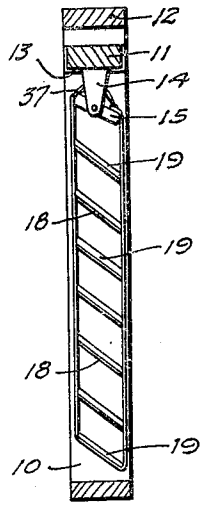


Fig. 2

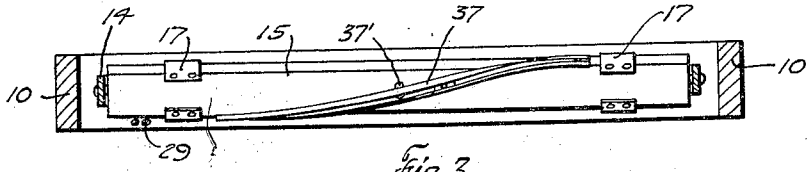


Fig. 3

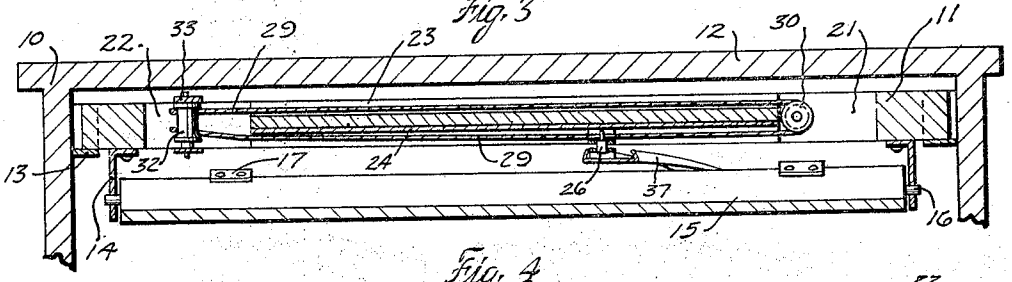


Fig. 4

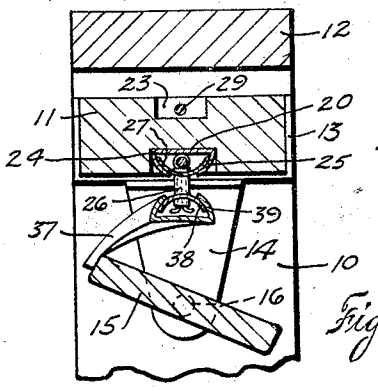


Fig. 5

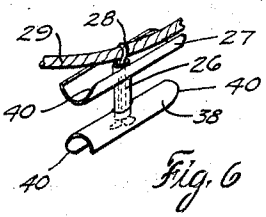


Fig. 6

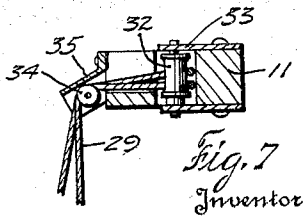


Fig. 7

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UNITED STATES PATENT OFFICE

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SLAT ADJUSTING DEVICE FOR LOUVER OR VENETIAN BLINDS

Application filed May 14, 1931. Serial No. 537,231.

This invention relates to new and useful improvements in slat adjusting devices for louver blinds.

One object of the invention is to provide improved means for adjusting or tilting the slats of the ordinary louver or Venetian blind.

A particular object of the invention is to provide a positive means for adjusting the slats of a louver blind to any desired angle and when so adjusted to maintain the slats in such position against displacement.

A further object of the invention is to automatically lock the slats of the louver blind in adjusted positions, but whereby the adjusting cords are left free to alter the adjustment whenever desired, and also whereby the use of hooks and other auxiliary fastening devices is eliminated.

A construction designed to carry out the invention will be hereinafter described together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings in which an example of the invention is shown, and wherein:

Figure 1 is a front elevation of a louver blind with adjusting means constructed in accordance with the invention,

Figure 2 is a transverse vertical sectional view taken on the line 2—2 of Figure 1,

Figure 3 is a horizontal cross-sectional view taken on the line 3—3 of Figure 1,

Figure 4 is a longitudinal vertical sectional view of the upper portion of the structure,

Figure 5 is an enlarged transverse vertical sectional view taken on the line 5—5 of Figure 1, and

Figure 6 is a perspective view of the carriage.

Figure 7 is a sectional view of the cord guide and housing bracket.

In the drawings the numeral 10 designates the rectangular frame in which the blind is mounted and which, of course, may vary in width and height. A longitudinal head or supporting bar 11 is secured within the frame just under the top lintel 12. The head bar is mounted in suitable keepers 13 secured to the inner sides of the frame 10. Hangers 14 secured to the underside of the bar depend therefrom. A longitudinal master slat 15 is provided at its ends with trunnions 16 journaled in said hangers, whereby said slat is journaled and may be transversely rocked.

Flexible loops or tapes 17 of fabric or other suitable material have their ends fastened to opposite sides of the master slat 15, as is the usual practice, and hang from said slat a short distance from each end thereof. Flexible transverse strips or webs 18 extend between the vertical lengths of each loop and are secured thereto. The usual slats 19 are carried on these strips, being loosely inserted in the loops and regularly spaced in the usual manner. So far as the loops 17, strips 18 and the slats 19 are concerned, they are of the ordinary construction now in common use and may be varied to suit the desires of the builder.

The invention has to do with the rocking or tilting of the master slat 15, whereby the loops 17 are adjusted and the angle or the inclination of the slats 19 is changed; the slats being adjusted from a horizontal position where the blind is wide open to a nearly vertical position where the blind is fully closed and to the various intermediate positions. In the underside of the head bar 11 I provide a longitudinal central groove 20, which extends from a slot 21 to a slot 22, as is best shown in Figure 4, said slots being located substantially over the loops 17. A second groove 23 is formed in the top of the bar over the groove 20. A metal channel 24 is fastened in the groove 20 and its longitudinal side flanges 25 are transversely curved toward each other.

A carriage 26, as is shown in Figure 6, is provided with an upper curved shoe 27 fitting in the channel and slidable longitudinally thereof. The carriage is provided with an eye 28, in which is secured a cord 29. The cord passes around a pulley 30 journaled in the slot 21 and extends through the groove 23. The two runs of the cord pass over a roller 32 journaled in the slot 22 between brackets 33 at right-angles to said pulley. These cords are carried outwardly and over a pulley 34 journaled in a bracket housing 35

secured to the bar 11, as is shown in Figures 1 and 7. Handles 36 are secured to the hanging ends of the cords.

It will be seen that when one of the handles is pulled the cord will be moved in one direction and when the other handle is pulled the cord will be moved in the opposite direction. The carriage 26, being fastened to the cord, will be reciprocated in the channel 24 by the opposite movements of the cord. A sinuous metal rocking channel 37 has its ends fastened to opposite edges of the master slat 15 between the loops 17. It will be noted that this channel is not only sinuous but is arched or bowed from one end to the other so that when the slat 15 is rocked a constant distance will be maintained between the channel 37 and the channel 24, particularly where the carriage 26 connects the same. The channel 37 is supported at its central portion by a post 37′ extending upwardly from the master slat 15.

The carriage 26 has a lower shoe 38 which is transversely curved to engage in the channel 37 under its transversely curved longitudinal side flanges 39. It is obvious that the shoe 38 being connected with the shoe 27, will travel in the channel 37 when the carriage is reciprocated by the cord 29. The shoe 27 traveling in a rectilinear direction will cause the shoe 38 to likewise travel and the channel 37 will thus be transversely displaced, thus rocking the master slat 15 as said shoe is moved. The rocking of the master slat 15 will actuate the loops 17 whereby the slats 19 will be adjusted as desired.

It is obvious that an independent rocking or tilting movement of the slat 15 will be resisted by the shoes of the carriage as such shoes are movable only longitudinally of the channels and thus the master slat will be positively locked in the position to which it is adjusted. As indicated at 40, the diagonally opposite corners of the lower shoe 38 are rounded and both shoes are journaled on the shank of the carriage 26 so that they will freely swing and slide in the channels. It is pointed out however that it would not be necessary to journal or pivot the upper shoe. The device is readily and easily operated and the slats are readily adjusted by grasping one of the handles and pulling it downwardly.

While the guide channel 37 has been described as of a sinuous shape, it is obvious that the purpose of the guide is to rock the master slat 15 and it must, therefore, extend from side to side of said slat at an angle to the channel 24 and the invention is not to be limited to a sinuous channel and may include any means of an equivalent nature.

Various changes in the size and shape of the different parts, as well as modifications and alterations, may be made within the scope of the appended claims.

Having illustrated and described a preferred form of the invention, what I claim, is:

1. In a louver blind adjusting device, a head bar, a rocking master slat, a plurality of slats suspended from the master slat, a sinuous rocking member mounted on the master slat, means movable longitudinally of the head bar and traveling on the rocking member for rocking the latter, and means for reciprocating said traveling means.

2. In a louver blind adjusting device, a head bar, a rocking master slat, a plurality of slats suspended from the master slat, a sinuous rocking member mounted on the master slat, means movable longitudinally of the head bar and traveling on the rocking member for rocking the latter, and a flexible connection mounted on the head bar to reciprocate and attached to said traveling means.

3. In a louver blind adjusting device, a support, a guide member, a carriage reciprocating on the guide member, means for reciprocating the carriage, and a bowed sinuous rocking member on which the carriage travels.

4. In a louver blind adjusting device, a longitudinal guide channel, a bowed rocking channel, a carriage having shoes engaging in the channels, and means for reciprocating the carriage.

5. In a louver blind adjusting device, a longitudinal guide channel, a bowed rocking channel, a carriage having shoes engaging in the channels, and a flexible connection arranged to be reciprocated and attached to the carriage.

6. In a louver blind adjusting device, a support, a blind suspended from the support, a flexible connection mounted to move on the support, a guide channel extending longitudinally of the support, a bowed sinuous rocking channel attached to the blind, and a carriage traveling in both channels and attached to the flexible connection.

7. In a louver blind adjusting device, a support, a blind suspended from the support, a flexible connection mounted to move on the support, a guide channel having transversely curved side flanges and extending longitudinally of the support, a bowed sinuous guide channel attached to the blind and transversely curved side flanges, and a carriage attached to the flexible connection and including curved pivoted shoes engaging in said channels.

8. In a louver blind adjusting device, a support, pulleys mounted in the support, a flexible connection passing over said pulleys, a longitudinal guide mounted on the support between the pulleys, a master slat journaled under the support, slats suspended from said master slat, a rocking element mounted on the master slat, means traveling on the guide and engaging the rocking element for rock-

ing the latter, and means for reciprocating said traveling means.

9. In a louver blind adjusting device, a support, pulleys mounted in the support, a flexible connection passing over said pulleys, a longitudinal guide channel mounted on the under side of the support between the pulleys, a master slat journaled under the support, slats suspended from the master slat, a bowed channel mounted on the master slat and extending longitudinally from one side to the other side of said master slat, and a carriage traveling in said channels and attached to said flexible connection.

In testimony whereof I affix my signature.

CHARLEY D. AGEE.