March 11, 1941. J. W. MURRAY 2,234,804

BLIND

Filed Aug. 22, 1938 3 Sheets-Sheet 1

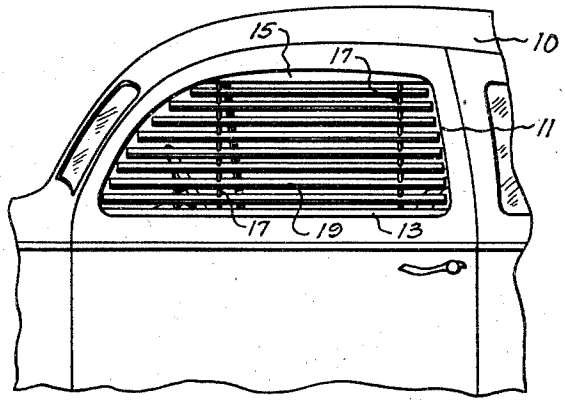


Fig. 1.

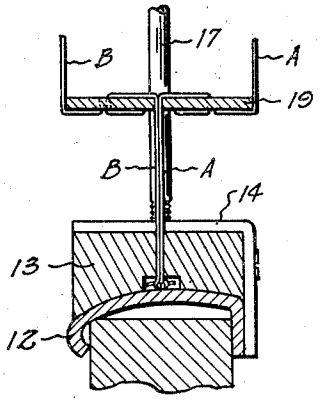


Fig. 6.

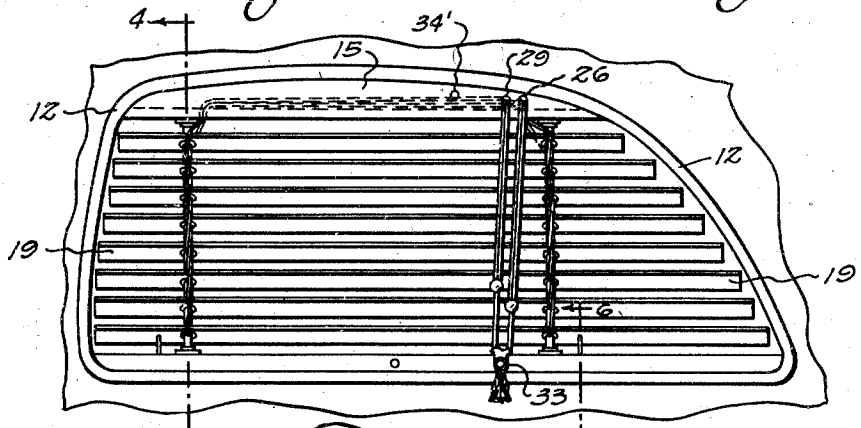


Fig. 2.

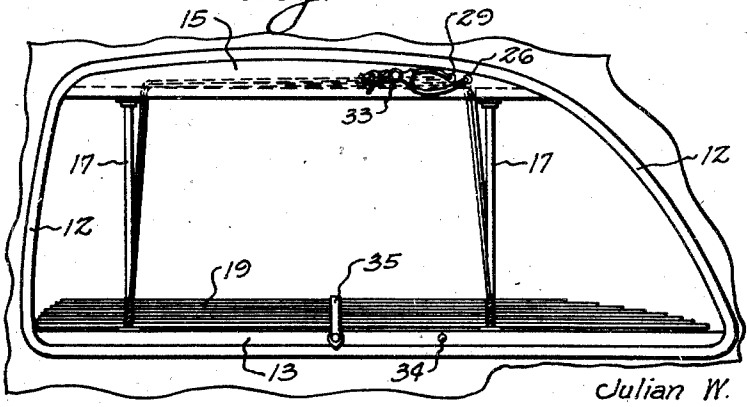


Fig. 3.

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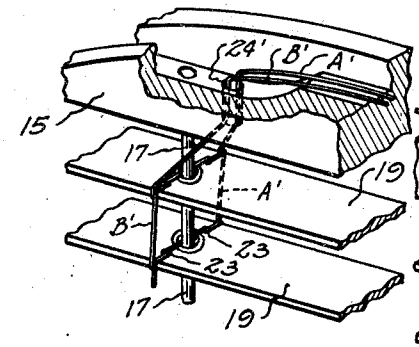
By

Attorney

March 11, 1941. J. W. MURRAY 2,234,804

BLIND

Filed Aug. 22, 1938 3 Sheets-Sheet 2



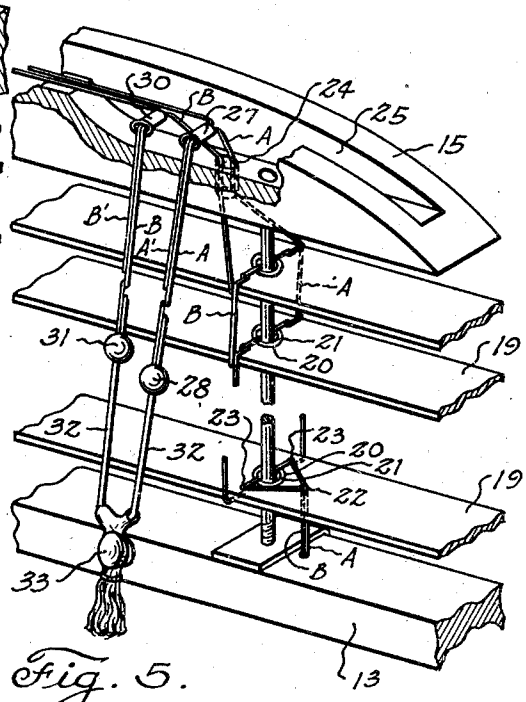


Fig. 5.

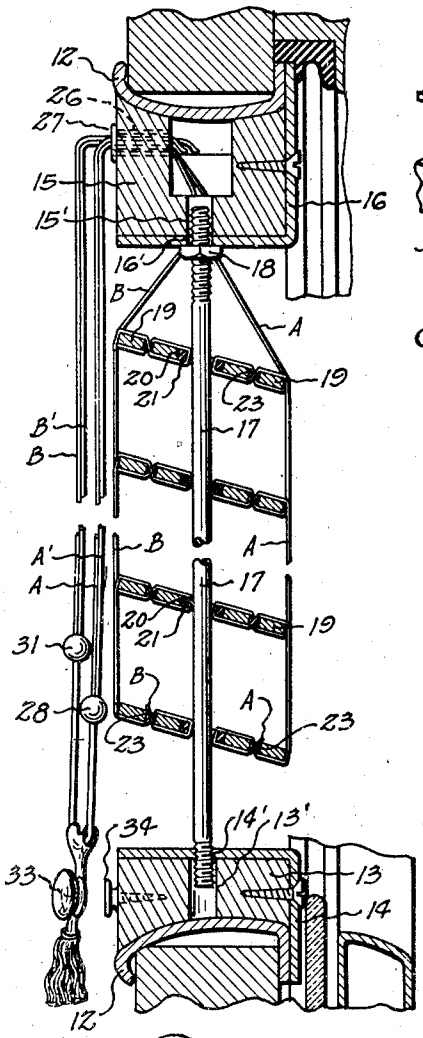


Fig. 4.

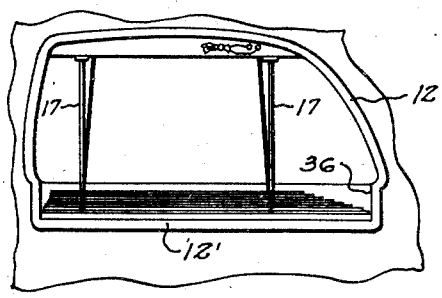


Fig. 7.

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March 11, 1941. J. W. MURRAY 2,234,804

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Filed Aug. 22, 1938 3 Sheets-Sheet 3

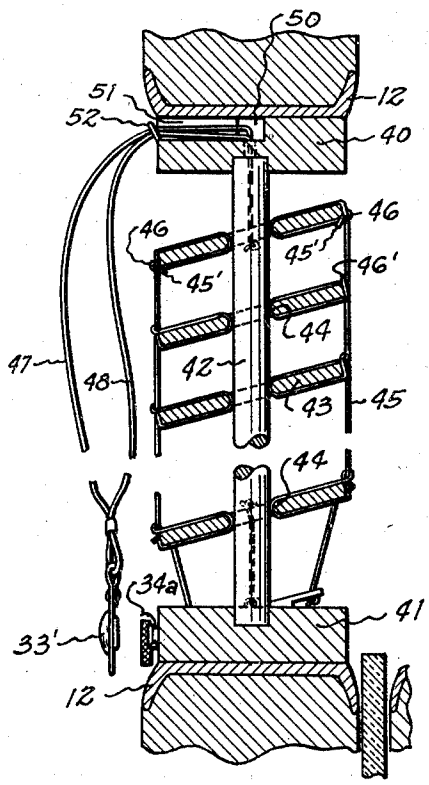


Fig. 10.

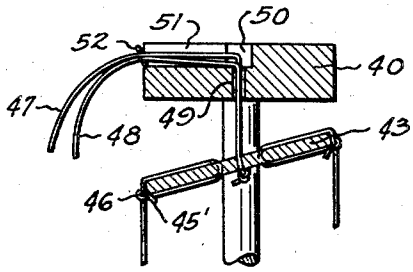


Fig. 12.

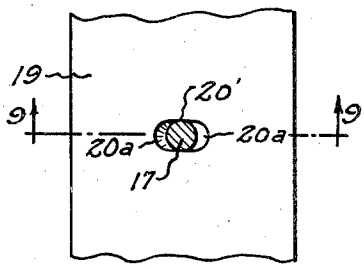


Fig. 8.

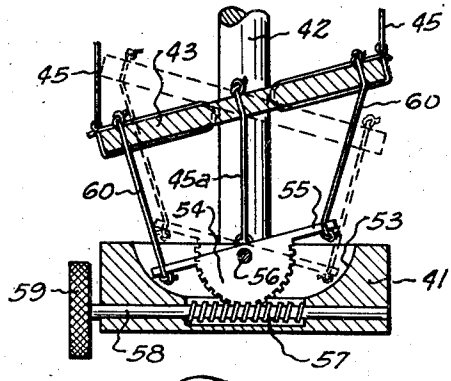


Fig. 11.

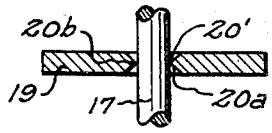


Fig. 9.

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Patented Mar. 11, 1941

2,234,804

UNITED STATES PATENT OFFICE

2,234,804

BLIND

Julian W. Murray, Dallas, Tex.

Application August 22, 1938, Serial No. 226,020

17 Claims. (Cl. 156—17)

This invention relates to new and useful improvements in blinds.

This application is filed as a continuation-in-part of my copending application, Serial No. 114,101, filed December 4, 1936.

One object of the invention is to provide an improved blind of the slatted type which is adapted for use with motor vehicle windows, and particularly with windows having curved outlines such as are usually found in motor vehicles of present design; the construction of the blind being such that an efficient sunshade is provided without materially interfering with the lateral vision of the operator.

An important object of the invention is to provide an improved blind of the slatted type which is so constructed that the operation of the blind, that is, raising or lowering said blind or tilting the slats, thereof, may be controlled from a single point and with one hand, whereby the operation is greatly facilitated.

A particular object of the invention is to provide an improved vehicle blind having rigid guide members upon which the slats are slidable, whereby said slats are positively guided in the vertical movement and the tendency of the slats binding or hanging during their vertical movement is substantially eliminated; the guide rods also being arranged to secure the blind in position in the window frame, whereby auxiliary fastening means for this purpose is eliminated and a simpler construction produced.

Another object of the invention is to provide an improved vehicle blind, of the character described, which may be readily applied and mounted within a motor vehicle window frame without the necessity of structural changes in said frame and without marring the finish of said frame.

A further object of the invention is to provide an improved blind of the character described, wherein lengths of cord or a similar flexible element, are employed to connect the slats together for simultaneous operation and to hold the same in their proper spaced relation; the arrangement of said cord being such that most efficient operation is had and manufacturing is not only simplified, but the cost thereof is greatly reduced.

Still another object of the invention is to provide an improved motor vehicle blind, of the character described, having means for readily adjusting the slats to various tilted or inclined positions, with means for holding the same in such position.

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 an elevation of a blind, constructed in accordance with the invention, and showing the blind mounted in an automobile window,

Figure 2 is an enlarged elevation of the opposite side of the blind, with said blind in a raised position,

Figure 3 is a view similar to Figure 2 with the blind in a lowered position,

Figure 4 is an enlarged, transverse, vertical, sectional view, taken on the line 4—4 of Figure 2,

Figure 5 is an enlarged partial isometric view of the blind, with portions thereof broken away to more clearly illustrate the construction,

Figure 6 is a transverse, vertical, sectional view, taken on the line 6—6 of Figure 2,

Figure 7 is an elevation of the blind showing the same mounted below the level of the bottom sill of the vehicle window,

Figure 8 is a partial plan view of a slat having a modified opening through which the guide rod extends,

Figure 9 is a transverse, vertical, sectional view taken on the line 9—9 of Figure 8,

Figure 10 is an enlarged tranverse, vertical, sectional view showing a modified form of the invention,

Figure 11 is a sectional detail showing the adjusting means for controlling the inclination or tilting of the slats of the modified form, and

Figure 12 is a sectional detail showing the connection of the cord with the uppermost slat, whereby the blind may be raised and lowered.

In the drawings, the numeral 10 designates an automobile or other motor vehicle having window openings 11 therein. In the usual window structure, a molding 12 is fastened in the window frame and is provided for covering the edges of the upholstery to give a more finished appearance to the inside of the window opening. The window glass which is movable vertically to close the window opening is disposed in a vertical plane outside of this molding. The blind structure, hereinafter described, is adapted to be mounted or secured to this inner molding 12.

The blind frame includes an elongate supporting bar or base member 13 which has its underside curved to fit snugly on the lower sill strip of the molding 12. This base member or bar

has a width substantially equal to the width of the molding, as is clearly shown in Figure 4. Since the molding has its surface curved downwardly toward the inside of the vehicle, the tendency for the bar 12 is to slide inwardly of said molding. To prevent such inward movement of the bar, a pair of angular clips 14 are secured to the bar. Each clip is angular in cross-section and has its upper leg overlying the top of the bar. The vertical leg of the clip 14 extends downwardly contiguous to the outer surface of the bar and has its lower end engaging the outer side of the molding. Manifestly, when the bar is in position on the molding, the clips prevent inward displacement of said bar.

An upper frame bar 15 is adapted to fit the curved portion of the top sill of the molding 12. This upper bar has a width substantially equal to the width of the lower bar and is also provided with angular clips 16 which overlie the bottom and outer side of the bar 15. Manifestly, the clips 16 prevent inward displacement of the bar.

For holding the frame bars 13 and 15 in position on the molding 12, a pair of vertical rigid rods 17 are adapted to extend between said bars. As is clearly shown in Figures 3 to 5, the rods are spaced from each other, being located nearer the vertical sides of the window openings 11. Each rod has its lower end threaded to an opening 14' provided in the clip 14 which is fastened to the base member or bar 13. The extreme lower end of the rod extends into an opening 13' which is formed in the member 13 below the opening 14' in the clip. The upper end of each rod 17 extends through an opening 16' in the clip 16 and into an opening 15' formed in the upper frame bar 15. This upper end of the rod 17 is externally screw-threaded to receive a nut 18, which nut is adapted to be screwed upwardly on the rod until it abuts the clip 16. With this arrangement, the lower ends of the rods 17 are firmly fastened within the clips 14 on the base member 13. The upper ends of said rods are free of direct connection with the upper frame bar 15 and when the nut 18 is screwed upwardly against the frame bar 15, the frame bars 15 and 13 are forced into tight frictional engagement with the molding 12. In order to remove the bars from the frame, it is only necessary to unscrew the nut 18 so as to move it away from the bar 15. The upper bar 15 may then be lowered with relation to the rods 17, whereby it may be disengaged from the sill 12. Thus, it is not necessary to employ screws or other auxiliary fastening means for mounting the frame bars on the molding 12. The bars are held in position by the frictional engagement with said molding.

The rods 17 not only provide an efficient fastening means for holding the frame bars 13 and 15 in position within the window opening, but also provide a guide means on which a plurality of elongate flat slats 19 may be mounted. The slats are slidable vertically on the guide rods 17, each slat having a pair of openings 20 through which the rods extend. Each opening 20 may have a rubber grommet or insert 21 suitably fastened therein and obviously the use of such grommet prevents rattling and undue noise created by the slats striking the rods. The slats 19 are connected together by connecting cords and are arranged to operate in the usual manner of a Venetian blind. The particular threading of the cords through and around the slats 19 is an important feature of the invention for it greatly simplifies the construction.

In connecting the slats by means of the cord, a cord A (Figure 5) has one end secured to the base member 13 adjacent one of the clips 14 and this cord extends upwardly through an opening 22 formed in the lowermost slat 19. After passing through the opening 22, the cord overlies the top of the slat and is passed downwardly through an opening 23 which is provided in the slat and which is located substantially midway between the central opening 20 through which the guide rods 17 extend and the outer edge of said slat. The cord A is then passed downwardly beneath the slat and inwardly toward the center thereof, after which the cord passes upwardly through the opening 20 and is then brought over the top of the slat and back downwardly through the opening 23. After again passing through the opening 23 (Figure 4) the cord passes beneath the slat to the outer edge thereof and is then brought upwardly toward the slat next above. Upon reaching the next above slat, the cord extends past the outer edge thereof and is then directed inwardly over the top of said slat and downwardly through the opening 23. After passing through the opening 23, the cord is passed inwardly beneath the slat, upwardly through the opening 20, then over the top of said slat and back downwardly through the opening 23, then beneath the slat, after which it extends upwardly to the next above slat. The cord is thus fastened to each slat in order and by observing Figure 4, it will be seen that the cord describes substantially a figure eight through the opening 23 and 20 of each slat. After being connected to the uppermost slat, the cord A is directed inwardly and passed upwardly through an opening 24 which is formed in the upper frame bar 15. The opening 24 communicates with a longitudinal groove 25 provided in the bar 15, whereby the cord A extends into said groove. From the groove, the cord is passed through an opening 26 which has a ferrule 27 disposed therein, said opening being directed laterally through the side wall of the frame bar 15. After passing through the ferrule, the cord A extends downwardly and has its lower end secured to a ball 28. As is clearly shown in Figure 4, the opening 26 is disposed on the inner side of the frame bar 15 and, manifestly, the cord A, which is secured to the slats and which extends upwardly through the groove 25 in the frame bar, has its inner end located within the inside of the vehicle.

The cord A is a continuous link and is fastened to one side of the slat 19, such fastening occurring adjacent one of the guide rods 17. A second cord B, which is secured to the slats in the same manner, has one end secured in the base member 13 adjacent the cord A and is then extended upwardly and connected with the various slats on the side opposite that to which the cord A is fastened. Upon connecting with the uppermost slat, the cord B is passed upwardly through the opening 24 and extends through the groove to an opening 29 which has a ferrule 30 therein and which is located in the wall of the frame bar 15 adjacent the opening 26. After passing through the opening 29, the cord B extends downwardly on the inside of the slats and is secured to an operating ball 31.

From the foregoing, it will be seen that the cord A, which is secured to the ball 28, is connected to one side of all of the slats adjacent one of the guide rods, while the cord B is secured to

the opposite side of said slats also adjacent said rod. By exerting a pull on the ball 28, it will be seen that the cord A will be pulled upwardly through the opening 24 and outwardly through the opening 26. When this occurs, a pull is exerted on the outer longitudinal edges of the slats, which edges are engaged by the cord A and thus an upward pull will cause a tilting of the slats. Similarly, a downward pull on the ball 31 will cause the cord B to pull upwardly on the opposite longitudinal edges of the slats, whereby said slats are tilted in an opposite direction.

The cords A and B provide for a connection at one end portion of the slats and, for connecting the opposite end portion of the slats which is that portion contiguous to the other guide rod 17, similar cords A' and B' are provided. The cord A' is secured to the slats in exactly the same manner as the cord A and this cord extends upwardly through an opening 24' formed in the upper frame bar 15 adjacent to the other guide rod 17. The cord A' extends through the longitudinal groove 25 in the bar and passes through the opening 26 and ferrule 27 alongside of the cord A. The extremity of the cord A' is also secured to the operating ball 28. Similarly, the cord B' is fastened to the slats opposite the cord A' and has its end extending through the opening 26' and then through the groove 25 in the bar 15, after which it passes through the opening 29 and ferrule 30 alongside of the cord B. The extremity of the cord B' is secured to the operating ball 31 along with the cord B. With this arrangement, it will be obvious that when the ball 28 is pulled downwardly, an upward pull is exerted on the cords A and A' whereby the longitudinal edges of the slats which are engaged by the cords A and A' are pulled upwardly, resulting in a tilting of the slats. Of course, when the ball 28 is pulled downwardly and the slats are tilted, a downward pull is exerted on the cords B and B' due to their connection with the slats, with the result that the ball 31 automatically rises.

When it is desired to tilt the slats in an opposite direction, a downward pull on the ball 31 will cause the cords B and B' to exert an upward pull on the longitudinal edges of the slats which are engaged by said cords B and B' and thus a tilting of the slats in the opposite direction may be accomplished. By properly manipulating the balls 28 and 31, it is possible to obtain a desired tilting or adjustment of the slats. Due to the particular fastening of the cords to the slats, said cords are more or less taut, with the result that the slats remain in any position to which they are adjusted.

The cords A and A', as well as the cords B and B', are utilized not only for controlling the tilting of the slats, but are also employed for raising and lowering said slats between the frame bars 15 and 13. In Figure 5, the slats are in their raised position and are held so by the cords. As is clearly shown in this figure, a length of cord 32 has its extremities secured to the balls 28 and 31 whereby a loop is formed below said balls. This loop which connects the balls has the socket member 33 of a snap fastener mounted thereon and said socket member is adapted to snap onto the usual button 34 of this type of fastener, which button is secured to the inner longitudinal edge of the base member 13. The length of the cords A, A', B and B', as well as the length of the loop 32, is such that when the slats 19 are in their raised position, the socket 33 is directly opposite the button 34 of the fastener, whereby said socket may be engaged with said fastener. The socket 33 is slidable on the loop 32 so that when the fastener is engaged holding the slats in a raised position, the balls 28 and 31 may be moved, which moves the loop with relation to the member 33, said loop sliding through its connecting means. Thus, a tilting or adjusting of the slats may be accomplished with the same being held in their raised position.

When it is desired to lower the slats, it is only necessary to disengage the socket member 33 from the button 34 and permit the slats to fall downwardly through their own weight. If desired, a second button 34' may be provided on the upper frame bar 15, whereby when the slats are in a lowered position, as shown in Figure 3, the socket 33 may be snapped onto the button 34' so as to keep the same out of the way.

When the slats are in a lowered position, they rest on the lower sill of the molding 12 and if desired a retaining strap 35 may be engaged thereover so as to rigidly hold the slats in engagement with each other when the same are lowered. The strap 35 would prevent undue rattling of the slats when in such lowered position.

It is pointed out that the slats 19 are guided in their movement by the rigid guide rods 17 which are comparatively small in cross-section, whereby when the slats are in their lowered position, said rods do not materially interfere with the vision of the occupant of the vehicle, and also whereby said rods do not detract from the appearance of the vehicle. Further, the rigid rods positively maintain the slats in position within the frame when said slats are raised, thereby preventing the wind or suction created by the motion of the vehicle from displacing or interfering with the blind. Also, since the rod has a smooth surface, any tendency of the slats to hang or bind on said rod is eliminated.

In Figures 1 to 6, the slats 19 are shown as resting directly on the lower sill of the usual molding 12, whereby when they are in a lowered position they extend slightly above the plane of said sill. If it is desired to hide the slats from view when observing the same from the outside of the vehicle, it would be possible to provide a recess 36 on the inside of the window opening as shown in Figure 7. In such event, the lower sill 12' of the molding 12 would be lowered with relation to the window opening and, in such event, it will be obvious that when the slats are in a lowered position, the uppermost slat is below the bottom of the window opening on the outside of the window glass of the vehicle.

Although it is desirable to employ the rubber grommet or insert 21 to prevent undue rattling of the slats 19 when in a raised position, such grommet may be eliminated and the opening through which the guide rods 17 extend made as shown in Figures 8 and 9. The opening 20' shown in these figures has its central portion cylindrical and substantially equal to the outer diameter of the rod whereby a substantially snug fit between the rod and opening is had. The upper and lower ends of the opening are bevelled as shown at 20a, such bevels being on each side of the rod and extending transversely of the slat. With such arrangement, it will be obvious that a longitudinal tilting of the slat is impossible because the transverse width of the opening is substantially the same as the diameter of the rod. However, due to the bevelled portion 20a, it is possible to tilt the slat transversely,

whereby a proper adjustment of said slat may be obtained. When the slat is tilted transversely, the fulcrum of the slat occurs at the point 20b (Figure 9) which is that point midway between the bevel 20a. With this arrangement, undue rattling of the slats is prevented, while the tilting of said slats is permitted.

As has been pointed out, it is desirable that the cords which control the tilting of the slats are also employed for raising and lowering said slats, but this is not essential. In Figures 10 to 12, a modified form of the invention is disclosed, wherein a separate adjusting means for controlling the tilting of said slats is provided. Referring to Figure 10, it will be seen that this form comprises an upper frame bar 40 and a lower frame bar 41, which have a pair of rigid guide rods 42 extending therebetween. These rods are fastened in the frame bars 40 and 41 in any suitable manner and said bars are secured to the molding 12 of the vehicle by means of elongate screws which pass through the bars and through the molding into the frame of the vehicle. In this form, the frictional engagement of the frame bars with the molding is not had.

A plurality of elongate flat slats 43 are slidable vertically on the guide rods 42, each slat having a pair of openings 44 through which the rods extend. The slats are connected together by connecting cords 45. Starting at its upper end 45', each cord is directed from the outer edge of the uppermost slat transversely beneath said slat to the opening 44 in said slat. The cord extends upwardly through the opening and is then directed outwardly to the outer edge of the slat, after which it is extended downwardly to the next slat. At the point of intersection of the cord with its upper end 45', a knot 46 is tied. The cord is then extended downwardly to the outer edge of the slat next below and is directed inwardly beneath said slat to the opening 44, then upwardly through said opening and outwardly over the top of said slat, being knotted at 46', which knot is located contiguous to the outer edge of the slat. From said knot, the cord extends downwardly to the next below slat and is similarly secured thereto and to each succeeding slat as shown in Figure 10. Cords similarly secured to the slats are provided on each edge of the slats adjacent each vertical rod 42. The lowermost slat is connected to the lower bar 41 by short cords 45a secured to the mid-portion of the slat and the bar near the guide rods 42 (Figure 10).

For lowering and rasing the slats, a pair of lifting cords 47 and 48 are provided. Each cord has one end secured to the mid-portion of the upper slat near one of the guide rods 42 and extends upwardly therefrom to an opening 49 provided in the uppr frame bar 40 and projects into a longitudinal recess 50 provided in the upper portion of said bar. After passing through the groove, the cord passes through an opening 51 formed on the inner side of the bar and communicating with the groove 50. Said cords pass through an eyelet 52 and then are directed downwardly and connected together at their lower ends. A suitable socket 33' of a frictional fastener is attached to the lower ends of the cords 47 and 48 and this socket is adapted to engage a button 34a fastened to the lower frame bar 41. Manifestly, by raising and lowering the cords 47 and 48, the slats 43 may be raised and lowered. The upward movement of the slats is limited by the short cords 45a which connect the lowermost slats with the base member 41.

For varying the lateral inclination of the slats in this form, a recess 53 is provided in the lower bar 41 near one of the vertical guide rods 42 (Figure 11) and a semi-circular gear sector 54, having diametrically opposed arms 55 forming extensions of its upper straight edge, is mounted on a transverse shaft 56 within said recess. This gear sector meshes with a worm gear 57 which is mounted on a shaft 58 which extends transversely within the bar 41 and which also extends transversely through the recess 53. One end of the shaft 58 projects from the inner side of the bar and has a knurled operating knob 59 secured thereto, whereby the shaft may be manually rotated to rotate the worm and thereby swing the gear sector 54. Tie cords 60 extending through openings provided therefor in the lowermost slat near its outer edges, are secured at their lower ends to the ends of the radial arms 55 of the gear sector 54. These tie cords are taut when the blind is in its raised position, and it will be seen that movement of the gear sector will vary the inclination of the lower slat due to its connection thereto through the tie cords. Since all of the slats are connected by the taut connecting cords 45, it will be obvious that any inclination of the lowermost slat will be imparted by said cord to all the slats. The frictional engagement of the worm gear shaft 58 serves to prevent accidental movement of the gear sector and thereby serves to maintain the slats in any desired adjusted position.

From the foregoing, it will be seen that the improved blind shown in the various forms, may be readily raised or lowered and set at any desired inclined position with only one hand, whereby the operator of a vehicle may readily manipulate the blind without stopping the vehicle or in any other way being interfered with in such operation of the vehicle. Due to the fact that the slats of the blind are spaced from each other when in a raised position, it will be seen that the lateral vision of persons within the vehicle is not materially interfered with, yet the inclination of the slats provides an effective sunshade.

It is further noted that since the guide rods 42 are spaced inwardly from the vertical sides of the window opening 11, the slats may be made of varying lengths so as to follow the curvature of the window when in a raised position, whereby the slats extend completely across the window opening when raised, and thereby shade the interior of the vehicle.

The blind may be easily installed in the window frame, the form disclosed in Figures 1 to 6 being readily applicable or removable without the use of an auxiliary fastening means. In the form shown in Figures 10 to 12, the usual openings provided in the molding may receive elongate screws, whereby the construction of the vehicle need not be altered to accommodate the blind. It is to be understood that the slats of the blind may be made of any suitable material and any suitable manner of connecting the slats may be employed. It is preferable that the slats be made comparatively thin to reduce bulkiness in the lowered position because of the limited space within a vehicle window. With the arrangement described, it is possible to construct the slats of very thin material because it is not necessary that the slats be sufficiently thick to

receive tacks, screws or other fastening means in their edges.

The foregoing description of the invention is explanatory thereof and various changes in the size, shape and materials, as well as in the details of the illustrated construction may be made, within the scope of the appended claims, without departing from the spirit of the invention.

What I claim and desire to secure by Letters Patent is:

1. A blind for a motor vehicle window frame including, a bar mounted on the upper sill of the frame, a similar bar mounted on the lower sill of said frame, rigid guide rods extending between the bars and fastened thereto, and a plurality of slats slidable on said rods.

2. A blind adapted to be mounted in a window frame including, a bar overlying the upper sill of the frame, a similar bar overlying the lower sill of the frame, means extending between the bars for holding said bars in frictional engagement with the sills to maintain said bars in position in the frame, and a plurality of slats mounted between said bars.

3. A blind adapted to be mounted in a window frame including, a bar overlying the upper sill of the frame, a similar bar overlying the lower sill of the frame, a rigid rod extending between the bars and arranged to hold said bars in frictional engagement with the sills to maintain the bars in position within the window frame, and a plurality of slats slidably mounted on said rod.

4. A blind adapted to be mounted in a window frame including, a bar overlying the upper sill of the frame, a similar bar overlying the lower sill of the frame, a rigid rod extending between the bars and arranged to hold said bars in frictional engagement with the sills to maintain the bars in position within the window frame, a plurality of slats slidably mounted on said rod, and means for raising said slats into shading position between the bars.

5. A blind adapted to be mounted in a window frame including, a bar overlying the upper sill of the frame, a similar bar overlying the lower sill of the frame, a rigid rod extending between the bars and arranged to hold said bars in frictional engagement with the sills to maintain the bars in position within the window frame, a plurality of slats slidably mounted on said rod, flexible elements connecting the slats whereby said slats may be moved to a raised or lowered position, the elements terminating at a common point whereby said slats may be operated from a single point.

6. A blind adapted to be mounted in a window frame including, a pair of rigid guide rods spaced from each other and extending vertically across the window frame, a plurality of slats slidable on said rods, flexible connecting elements passed through and around said slats so as to be firmly secured to the slats for connecting said slats and being arranged to raise and lower the slats and also to tilt said slats to various lateral inclined positions.

7. A blind adapted to be mounted in a window frame including, a bar overlying the upper sill of the frame, a similar bar overlying the lower sill of the frame, a rigid rod extending between the bars and arranged to hold said bars in frictional engagement with the sills to maintain the bars in position within the window frame, a plurality of slats slidably mounted on said rod, flexible connecting elements secured to the slats for connecting said slats and being arranged to raise and lower the slats and also to tilt said slats to various lateral inclined positions.

8. A blind adapted to be mounted in a window frame including, a bar overlying the upper sill of the frame, a similar bar overlying the lower sill of the frame, a rigid rod extending between the bars and arranged to hold said bars in frictional engagement with the sills to maintain the bars in position within the window frame, a plurality of slats slidably mounted on said rod, and a plurality of cords secured to the slats, a portion of said cords being connected to the slats so as to exert a pull on one longitudinal edge of said slats, with the remainder of said cords being connected so as to exert a pull on the opposite longitudinal edge of said slats, whereby said cords may be manipulated to tilt the slats to various lateral positions.

9. A blind adapted to be mounted in a window frame having a curved outline including, a bar mounted on the upper sill of the frame, a similar bar mounted on the lower sill of said frame, rigid guide rods extending between said bars, and a plurality of slats of unequal length slidable on said rods.

10. A blind adapted to be mounted in a window frame including, a bar mounted on the upper sill of the frame, a similar bar mounted on the lower sill of said frame, rigid guide rods extending between said bars and fastened thereto, said rods being spaced from the vertical sides of the frame, a plurality of slats slidable on said rods, flexible cords for connecting the slats whereby said slats may be operated as a unit, and means for moving the slats into a shading position.

11. A blind adapted to be mounted in a window frame including, a bar mounted on the upper sill of the frame, a similar bar mounted on the lower sill of said frame, rigid guide rods secured to and extending between said bars and spaced inwardly of the vertical sides of the frame, a plurality of slats slidable on said rods, flexible cords for connecting the slats whereby said slats may be operated as a unit, and coacting lifting cords operable as a unit for moving the slats into a shading position.

12. A blind adapted to be mounted in a window frame including, a bar mounted on the upper sill of the frame, a similar bar mounted on the lower sill of said frame, rigid guide rods extending between said bars, a plurality of slats slidable on said rods, flexible cords for connecting the slats whereby said slats may be operated as a unit, means for moving the slats into a shading position, and a worm actuated gear sector connected to the lowermost slat by flexible cords for varying the angular disposition of the slats when in their shading position.

13. A blind adapted to be mounted within a motor vehicle window frame including, an upper bar extending contiguous to the upper sill of the window frame and adapted to be secured thereto, a lower bar overlying the lower sill of the window frame and adapted to be secured thereto, rigid guide rods extending between said bars and spaced inwardly from the ends thereof, whereby when the bars are fastened in the window frame the bars are spaced from the vertical sides of said frame, a plurality of slats conforming to the contour of the window frame and slidable on said rods, and flexible cords secured to the slats and engaging the outer longitudinal edges of the slats for connecting the slats to each other.

14. A blind adapted to be mounted in a window

frame including, a pair of rigid guide rods spaced from each other and extending vertically of the window frame, a plurality of slats slidable on said rods, a pair of cords secured to each end of the slats adjacent the guide rods, one of the cords of each pair of cords being connected to one longitudinal edge of the slats while the other cord on said pair is connected to the opposite longitudinal edge of the slats, whereby the cords of each pair may be manipulated to tilt the slats, both pairs of cords being connected at one extremity so that all the cords may be simultaneously operated to raise and lower the slats.

15. A blind adapted to be mounted in a window frame including, a pair of rigid guide rods spaced from each other and extending vertically of the window frame, a plurality of slats slidable on said rods, each slat having openings therein in addition to the opening through which the guide rod extends, a pair of operating cords, one of said cords being secured to one longitudinal edge of the slats by threading through the openings adjacent said edge, the second cord being similarly threaded through the openings adjacent the opposite longitudinal edge of said slats, whereby the cords may be manipulated to tilt the slats, and means for connecting the extremities of the cords to permit simultaneous operation thereof to raise and lower the slats.

16. A window shade including upper and lower bars, connecting rods therebetween constituting guides, slats mounted to tilt and slide upon the rods, flexible connections between the corresponding edges of the slats for holding said slats parallel when the shade is extended, looped operating cords extended from the upper bar, one of said cords being in engagement with one edge of one of the slats and the other cord being in engagement with the opposite edge of said slat, all of the cords being attached to and extended under said slat, the looped cords being so positioned that by pulling on both cords simultaneously the engaged slats will be pulled in one direction along the rods but when one cord is pulled independently of the other cord, the engaged slat will be tilted in one direction relative to the rods.

17. A window shade including upper and lower bars proportioned for snug engagement with the upper and lower portions of a window-frame, means on the respective bars for insertion into the upper and lower portions of the frame, guide rods constituting adjustable connections between the bars, superposed slats slidably and tiltably mounted on the rods and between the bars, flexible connections between the corresponding edges of the respective slats for holding the slats substantially parallel when the shade is extended, and means slidably mounted in one of the bars and secured to one of the slats for sliding and tilting said slat relative to the bar, said means including cords connected to the slat and engaging one longitudinal edge thereof, cords connected to the slat and engaging the other longitudinal edge thereof, all of said cords being extended into said bar, and loops formed by the cords and extended from the bar, said loops being connected, and means carried by the connected loops for detachable engagement with the other bar to hold the loops against operation while the slats are held in extended positions.

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