Nov. 20, 1956 B. WALKER 2,771,135

VENETIAN BLIND

Filed June 6, 1955

Fig. 1.

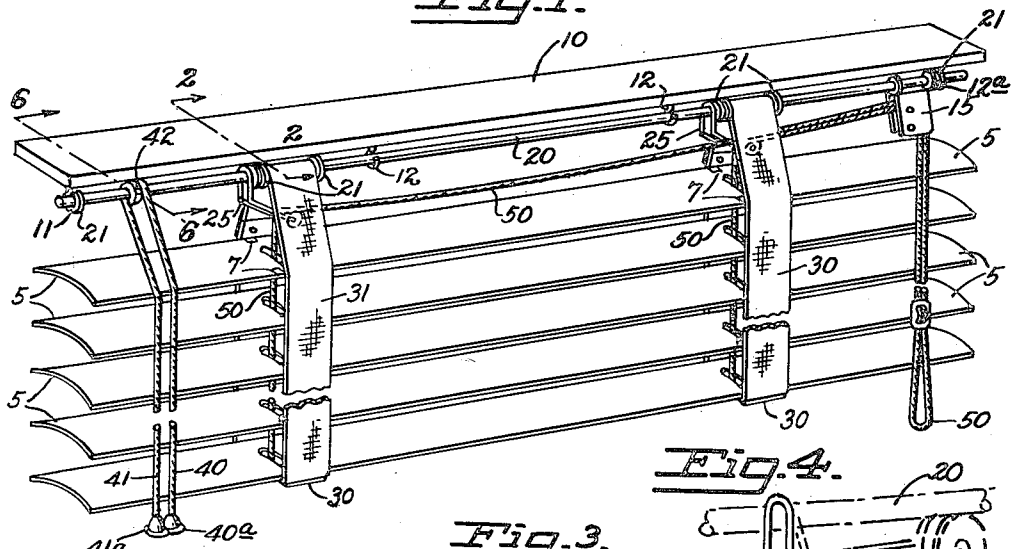


Fig. 4.

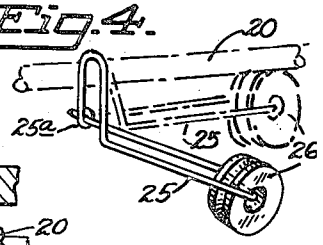


Fig. 3.

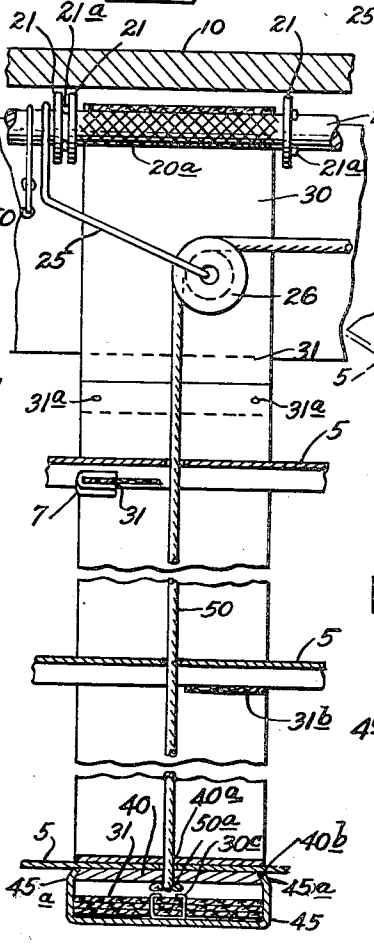


Fig. 2.

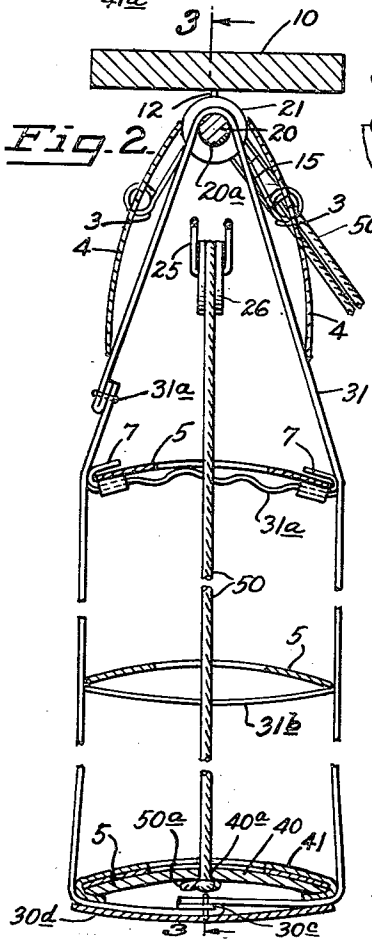


Fig. 5.

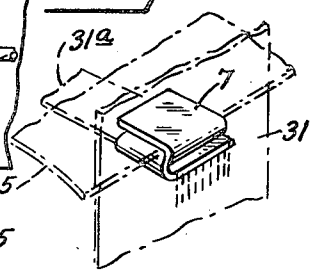
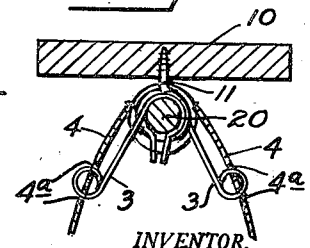


Fig. 6.



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VENETIAN BLIND

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Application June 6, 1955, Serial No. 513,219

5 Claims. (Cl. 160—168)

This invention pertains to improvements in Venetian blinds and particularly to the method of turning the direction of the lift cords.

This invention forms a continuation in part of my co-pending application, Ser. No. 398,704.

Another feature of this invention is the support of the cord lock on the rotating tilt rod and supporting the cord lock so that it tilts with the direction of pull of the lift cords.

Another feature is a means of supporting the lift cord pulleys from the tilt rod so that the blind can be completely assembled on the tilt rod; which includes the means for rotation from the tilt cords, the support for the ladder tapes, the lift cord turns or pulleys and the cordlock. This complete assembly which will control the tilt and raising or lowering of the blind can then be assembled in the support for the tilt rod or head rail, thus expediting the assembly, disassembling for cleaning, etc., as compared to conventional Venetian blind construction.

Another feature of the invention is the compact way in which the completed blind can be packaged in a very small package compared to conventional blinds for more economical shipment. To accomplish this compact shipment it is desirable to have the cord lock and lift cord turns or pulleys capable of moving so that the top slat can be packaged as close to the tilt rail and head rail as possible. This feature is provided in this invention by mounting the cord lock so that it swings on its support to be packed in a horizontal position and pivoting the lift cord turns or pulleys so that they move from their normal position substantially below the tilt rail to a position approximately in contact with the tilt rail when packaged for shipment.

Another feature is the very economical means for mounting the lift cord pulley on a wire loop that is assembled over the tilt rail so as to be hinged for movement of the pulley from a position where the pulley is materially below the tilt rod when the slats are being lifted by the lift cord and still allow the pulley to swing up against or alongside the tilt rail when packaged for shipment, etc.

Another feature of the invention is the construction wherein no headrail is necessary as the blind, cords and tapes are all supported on the tilt rod which in turn can be mounted on supporting brackets on the window frame.

Other features involve the simple and inexpensive method of securing the tilt cord, ladder tape, top loops, lift cord turns or pulleys and cord stop in their relative positions lengthwise of said tilt rod.

Another feature is the simple and inexpensive method of mounting the tilt rod from the head rail or window frame.

Another feature is the mounting of side slats on wire hangers to swing about the head rail as fascias.

Other objects of the invention will be more particularly pointed out in the accompanying specifications and claims.

I have illustrated my invention by way of example in the accompanying drawings, in which:

Fig. 1 is a side perspective drawing of a Venetian blind incorporating one form of the invention.

Fig. 2 is an enlarged end section view taken at section 2—2 of Fig. 1, with slat fascia added.

Fig. 3 is a vertical cross section taken at section 3—3 of Fig. 2.

Fig. 4 is a perspective view of the pulley support used in Figs. 1, 2, and 3.

Fig. 5 is an enlarged perspective view of the clip used between the top slat and the top cross rung, with part of the ladder tape, cross rung and slat shown dotted.

Fig. 6 is an end section of the head rail and tilt rail support taken at section 6—6 of Fig. 1, with slat fascia added, partly cut away.

In all figures like numerals of reference refer to corresponding parts.

In all figures I have shown a Venetian blind having a head rail or window frame **10** and a tilt rod **20**. Tilt rod **20** is supported on closed end screw eye **11**, intermediate open screw eyes **12**, and open end screw eye **12***a*. Tilt cord **40** and **41** is secured to tilt rod **20** by pin **42** with at least one full wrap of cord **40** and **41** around tilt rod **20** on each side of pin **42** respectively. Ladder tapes **30** and **31** have their ends joined as by rivets **31***a*, sewing, cementing, or other suitable means. The looped sides of the ladder tapes **30** and **31** are supported by tilt rod **20**. Tilt rod **20** is preferably roughened as by knurling (see Fig. 3) or application of a high friction coating or sleeve covering **20***a* under the looped sides of ladder tapes **30** and **31** respectively. Slats **5** are supported by the cross rungs, such as **31***a* and **31***b* in the usual manner.

Bottom weight **40** is secured to bottom slat **5** by clip **41** which goes over bottom slat **5** and engages the weight **40** near the edges of slat **5**. The bottom sides of tapes **30** and **31** are secured together as by rivet **30***c* or other suitable fastening. Cover **45** is secured to the undercut sides **40***b* of bottom weight **40** by side lips **45***a*. Lift cord **50** is secured to bottom weight **40** by passing cord **50** through hole **40***a* in weight **40** and tying a knot **50***a*, which knot **50***a* is then nested in the space between the concave side of weight **40** and the sides of ladder tape **30**. A bottom rail could be used if desired. Clips **7** are clamped to top cross rung **30***a* to form a sliding connection with the edges of top slat **5**, to prevent top slat **5** from climbing the edges of ladder tape sides **31** when the blind is tilted by the rotation of tilt rod **20** in the same manner as described in said co-pending application. Burs, such as **21***a*, are upset on tilt rod **20** adjacent washers **21** to keep tilt rod **20** from moving lengthwise relative to supporting screw eyes **11** at the lift end of tilt rod **20**, as viewed in Fig. 1, and screw eye **12** at the right end of tilt rod **20**, as also viewed in Fig. 1. This is accomplished by having washers **20** inside said screw eyes and upsets **21***a* inside said washers. Washers **21** could be press fit to rod **20** and inserted to the correct spacing by the use of holding jigs. Also, ladder tapes **30** and **31** are positioned between washers **21** which have upsets **21***a* outside said washers **21** which are next to said ladder tapes **30** and **31**. Another washer **21** is outside upset **21***a* to be between said upset **21***a* and wire support **25** for pulley **26**. Pulley **26** is the pulley for lift cord **50** and assumes a position about as shown in Figs. 1 and 3 when there is tension on cord **50**. Pulley **26** can move to the dotted position, shown in Fig. 4, when being shipped for more compact packaging. Lift cord **50** and cord lock **15** is pivoted to tilt rod **20** and are swingable about tilt rod **20**, so that it can line up with the angle of pull of cord **50** when the operator is pulling cord **50** at a distance in front of the slats or to the right of the slats, as viewed in Fig. 2. Also, cord lock **15** can swing horizontally, as viewed in Fig. 2, when packaging said blind for compact shipment. The ends of the wire for wire support **25** can be joined by a loop, such as **25***a*, to be detachable from tilt rod **20** or cord **50**.

I have shown a form of fascia that can be added for appearance and light closure in the form of slats **4**. Slats **4** are similar to slats **5** except that they have no route holes but do have double punches **4***a* to receive spring clip **3**. One end of clip **3** snaps over tilt rod **20** to support fascia slat **4**. The other end of spring clip **3** is adapted to engage fascia slat **4** through holes **4***a*. By this means the fascia slats are supported from the rotatable tilt rod **20**. The fascia slats can be easily snapped or removed and lie close to the ladder tape at their bottom edges in all positions of slat closure. The fascia slats can be packaged flat with the bottom slat after removal or at the sides of the slats. The fascia can fold out when the slats are raised for minimum window obstruction when the blind is raised. The fascia can be different from the slats and cut out for the lift cord and cord lock or ride on the lift cords.

Another feature of this invention is that with this fascia construction and with the tilt rail supported from brackets mounted on the material surrounding the window, no painted head or bottom rails are needed and the various colors of slats, cords, and tapes can be used without needing the material composing the head or tilt rails, the assorted colors of heads and tilts or the tools to work the heads and tilt rails. The same colored slat material can be used for the fascia slats as well as the blind slats.

By this construction I have provided a construction by which a Venetian blind can be assembled on the tilt rod, then the tilt rod assembled in the head rail supports which can be more than two if necessary. These supports can be on a head rail or attached to the window frame or material surrounding the window. The lift cord turns or pulleys can swing close to the tilt rail for compact shipment and the cord lock swings to line up with the angle of pull of the lift cords when pulled away from the line of fall of the slats and the cord lock can swing sideways for compact packaging. The ladder tapes are given a positive positioning relative to the tilt rod. The same device (upset **21***a*) also positions the lift cord pulley and an increased friction over the normal surface of tilt rod **20** is provided under the ladder tapes for more positive tilting.

To those skilled in the art to which this invention relates, many changes in construction and widely differing

embodiments and applications of the invention will suggest themselves without departing from the spirit and scope of the invention. The disclosures and the description herein are purely illustrative and are not intended to be in any sense limiting.

I claim is my invention:

1. A Venetian blind, including a rotating tilt rod, a tilt cord lock, tilt cords, ladder tapes, slats, lift cord turns, fascia slats, said fascia slats being supported one at each side of said tilt rod, supporting brackets, each said fascia slat hanging from at least one said bracket, said bracket being supported from said tilt rod, said tilt rod being free to rotate inside said bracket while said bracket supports said fascia slats, said fascia slats being free to rotate independently relative to each other for a substantial angle of swing about said tilt rod.

2. A Venetian blind, including a rotating tilt rod, a tilt cord lock, tilt cords, ladder tapes, slats, lift cord turns, a fascia, support clips, said fascia hanging at one side of said tilt rod, said fascia hanging from said tilt rod by said clips.

3. A Venetian blind, including a rotating tilt rod, a tilt cord lock, tilt cords, ladder tapes, slats, lift cord turns, a fascia, support clips, said fascia hanging at one side of said tilt rod, said fascia hanging from said tilt rod by said clips, said fascia swingable about said tilt rod relative to said tapes.

4. A Venetian blind, including a rotating tilt rod, a tilt cord lock, tilt cords, ladder tapes, slats, lift cord turns, fascia slats, said tilt cords, slats, lift cords, lift cord turns, cord lock, fascia all supported on said rod.

5. A Venetian blind, including a rotating tilt rod, a tilt cord lock, tilt cords, ladder tapes, slats, lift cord turns, fascia slats, said tilt cords, slats, lift cords, lift cord turns, cord lock, fascia all supported on said tilt rod, said tilt rod being rotated by said tilt cords relative to all other said components of said blind.

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