

April 7, 1953

J. J. FOGLIO
VENETIAN BLIND

2,633,909

Filed Jan. 26, 1950

2 SHEETS—SHEET 1

FIG. 1

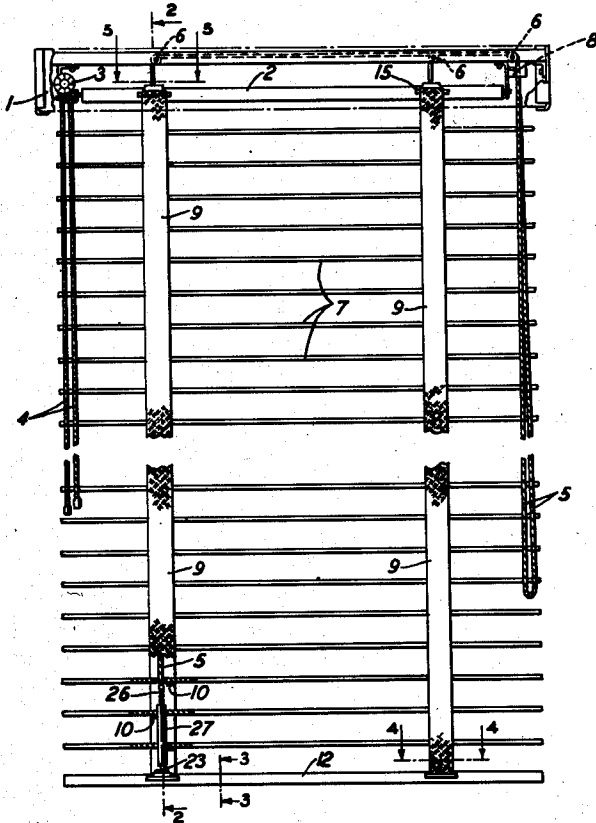


FIG. 2

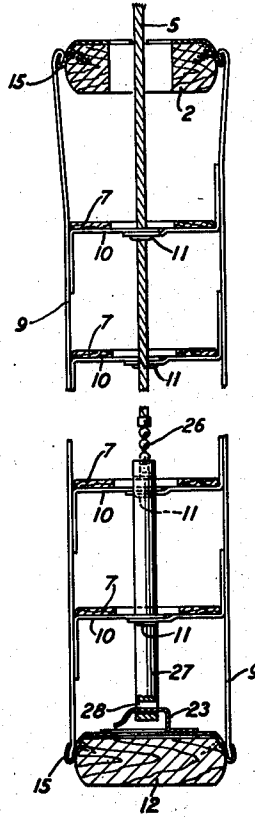


FIG. 3

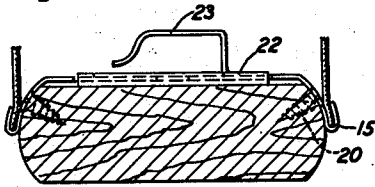


FIG. 4

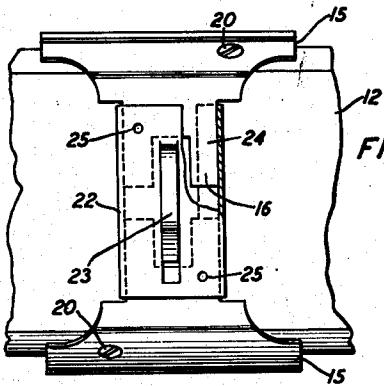
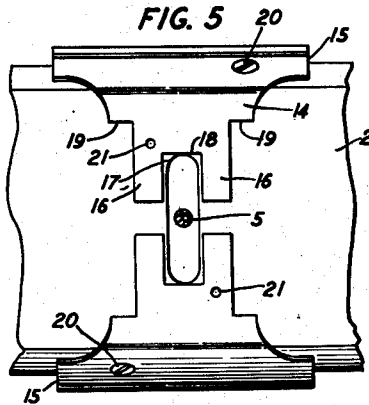


FIG. 5



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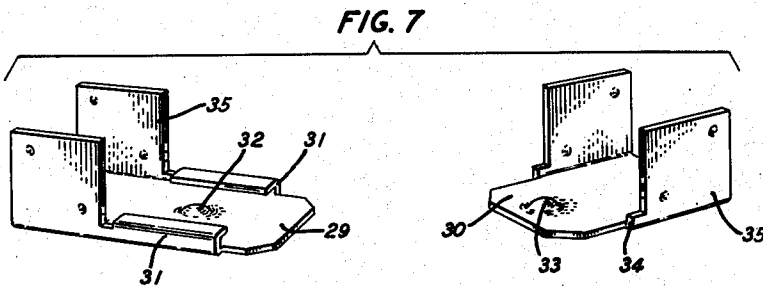
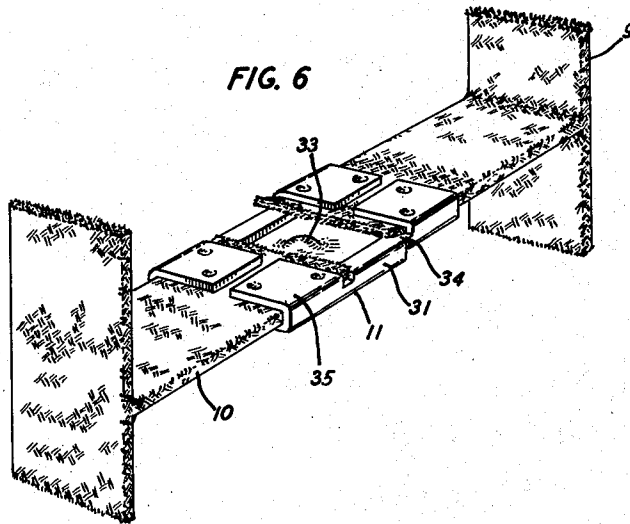
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2 SHEETS—SHEET 2



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UNITED STATES PATENT OFFICE

2,633,909

VENETIAN BLIND

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Application January 26, 1950, Serial No. 140,723

1 Claim. (Cl. 160—178)

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This invention relates to Venetian blinds of the type in which the slats and the supporting tapes may be readily removed by the householder.

An object of the invention is to provide a Venetian blind with readily removable slats in which a minimum of standardized parts are employed for detachably affixing the longitudinal tapes to the tilting bar and the lowermost bar.

A further object of this invention is to provide a Venetian blind in which the ladder tapes supporting the intermediate slats are readily opened to permit removal of the intermediate slats while preserving the continuity, and usual appearance, of the longitudinal tapes.

Still other objects and advantages of the Venetian blind of my invention will become apparent from the description and the accompanying drawings showing one form of my invention by way of illustration, in which:

Figure 1 is an elevation, partially in section and cut away, of a Venetian blind in accordance with my invention;

Figure 2 is a partial section along line 2—2 of Figure 1;

Figure 3 is an end view in the direction of the arrows identifying line 3—3 of Figure 1;

Figure 4 is a top view of the elements seen when looking in the direction of the arrows identifying line 4—4 in Figure 1;

Figure 5 is a similar view on line 5—5 of Figure 1;

Figure 6 is a perspective view on an enlarged scale of registering rung portions of the ladder tape locked to each other by a slip fastener; and

Figure 7 is a perspective view of the female and male slip fastener members before application to the rung tape portions.

Head board 1 is attached, in any usual manner, to the upper frame of a window, and the tilting bar 2 is supported therefrom by a bracket at either end, one bracket including the usual tilting worm gear means 3 actuable by the tilting cord 4. Pull cords 5 extend through grooves in the head board and over pulleys 6 therein, through openings in the head board, the tilting board and the plurality of slats 7, and may readily be raised or lowered by the free terminating loop thereof, shown in the right side portion of Figure 1, with the adjusted height of the blind being maintained by the usual clamping device 8. Laterally of the openings in the slats for the pull cords 5, the tape 9 has a plurality of pairs of mutually registering rung tape portions 10, the pairs being spaced at the desired vertical interval for the slats, for supporting individual slats. The rung tape portion pairs 10, viewed

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facing the blind and window, are for each succeeding slat to the inner, respectively, the outer side of each pull cord 5; thus in the illustrated blind for a given slat the rung tape portion pairs 10, one at each cord 5, are thus both to the inner side, or both to the outer side, of the respective cord.

In the Venetian blind of my invention, the ends of the rung tape portions 10 are each affixed permanently to the front, and rear, portions (again as viewed facing the blind and window) of the tape 9. A fastener of any known type may be interposed at some point other than the end regions of the ladder tapes, rather than as usual in the prior art and as shown, for example, in U. S. Patent 2,547,260 issued to me on April 3, 1951. In such case, should standard prefabricated Venetian blind tape be employed, the slats used in the blind made according to my invention will have to be narrower than usual due to the loss in length of the ladder tapes caused by the use of the usual snap fastener which requires an overlap of the severed ladder tape ends; and the number of intermediate slats will have to be increased for a given height of window, if a really effective Venetian blind is to result. I overcome this difficulty in the blind of the instant invention, by using a slip fastener 11 which compensates for the rung tape loss of length and, in given cases, may even increase such length, by inserting in the rung tape a length of the fastener itself substantially equal to the overlap which would be required by the use of the ordinary type of snap fastener. Furthermore, the slip fastener I employ, being essentially an extension of the tape, requires a pull in the length dimension of the tape, whereas snap fasteners require the application of a force at substantially right angles to the length dimension of the tape to open them. Slip fastener 11 comprises a female member 29 and a male member 30, the base of the male member being adapted to slide along the base of the female member in lateral grooves 31 on the latter and to be locked into position by the mound 32 centrally the female base registering with a corresponding detent 33 on the male base. The slip fastener members are affixed to the free end regions of the rung tape pairs 10 in any known manner, for example by integral side members 35 which are clamped over the fabric of the rungs against the respective fastener member bases. Registration of the mound 32 and the detent 33 on closure of the fastener is assured by so positioning them that they register when the near ends of the grooves 31 on the female strike against a stop 34 on each

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side member 35 of the male fastener member. With the use of slip fasteners in regions of the rung tapes other than the rung tape end regions, no foreign parts (usually metal) mar the appearance of the tapes; nor are some of the lengthwise fibers of the tapes 9 cut repeatedly, usually at rather regular intervals, thus resulting in an overall weakening of the tapes 9. Absent the foreign parts, a source of tape discoloration is eliminated, as also of irregular folding or pleating when the shade is completely, or almost completely, raised.

In my Venetian blind, each tape 9 consists, in fact, of two portions, of which each extends the full extended height of the blind, respectively to the front and rear thereof. Each end of such tape portion is affixed to the lowermost bar 12 and the tilting bar 2, respectively, by being slipped edgewise into a groove 15 of an identical fitting 14. Referring to Figures 2 and 5, the fitting 14, having a smooth curved base conforming to the curvature of the tilting bar 2, has a groove 15 parallel the front and rear of the bar and of metal sufficiently thin and springy to yield when threading the tape end into it edgewise, and to clamp the tape end within itself when the threading has been completed with sufficient force to retain the end therein even though there be a pull thereon when running the finger along the tape, as below described, to open the ladder tapes. The lower surface of the fitting 14 has a flat portion conforming to the flat portion of bar 2, from which extend two similar projections 16 at equal distances from the fitting center line, the projections 16 forming a groove 17 therebetween. The lower surfaces of projections 16 are at a distance from the flat surface of bar 2 about equal to their own thickness. Groove 17 is of sufficient width to permit the cords 5 to pass freely therethrough and has a bottom 18 at such depth that with the tilting bar tilted the maximum possible, there will be no interference with the cords 5. The projections 16 are of such length that when the fitting is attached to a bar, 2 or 12, their tops will be positioned on their respective fitting side of the center line of the narrowest standardized bar for Venetian blinds. The shoulders 19 serve as stops for the plate below described. Each fitting 14 may conveniently be affixed to the rounded portion of the exterior height surface of the bar by any convenient means, for example a screw 20, while on a diagonal therefrom and in the other side of the fitting, a nail hole 21 permits further attachment of the fitting to the flat top surface of the bar.

From Figures 4 and 5 it will be observed that a total of four identical fittings 14 are required for the front and rear portions of tape 9, a pair of fittings being affixed in front-and-back alignment across the upper surface of each the tilting bar 2 and the lowermost bar 12 for a pair of tape portions. As shown particularly in Figures 3 and 4, a plate 22 having perforated from

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its surface an integral formed hook 23, is provided with bent-over flanges 24 by which the plate 22 may be slid over the projections 16 of a fitting 14. The length of plate 22, as measured from the front to the back of the bar with which used, is such that for the minimum standardized bar width, the ends of the plates will strike the shoulders 19 of the pair of fittings over the projections 16 of which the plate is slid. Nailholes 25, registering with the nailholes 21 in the fittings 14 for the minimum standardized bar width, are provided in the plate, and will permit the driving of nails therethrough directly into the bar for the wider standardized bars.

When a person's extended finger is run down the inside of the front portion of each tape 9, or the tapes are pulled apart, the fasteners 11 are readily opened and the intermediate slats will drop onto the lowermost bar 12. So that the intermediate slats will readily stack, I end each pull cord 5 in a ball chain 26 and hang a metal rod 27 from the end of the ball chain, the rod having a hole 28 in its lower end region through which the hook 23 passes. To remove the stack of intermediate slats, the rod 27, preferably of a length exceeding the height of the stack, is unhooked from the hook 23, and the stack is then readily removable. The rigidity of rod 27 prevents the accidental drawing of the now free ends of the cords into the head board, since the pulleys 6 do not permit passage of the rods.

It will be noted that the householder can readily and simply convert the existing prior art Venetian blinds to those of my invention with the advantage of changing the tapes freely, and cleaning or replacing one or more of the intermediate slats with a minimum of difficulty.

What I claim is:

In a Venetian blind, a ladder tape comprising side portions of uniform width, a plurality of equally spaced rung tape portions integrally on the side portions, the rung tape portions on the respective side portions registering with each other, and slip fastener members on each rung tape portion adapted to engage frictionally longitudinally and to connect the registering rung tape portions in pairs.

JAMES J. FOGGIO.

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