March 19, 1940. J. D. FEENEY 2,194,277

VENETIAN BLIND

Filed Nov. 12, 1936

Fig. 2

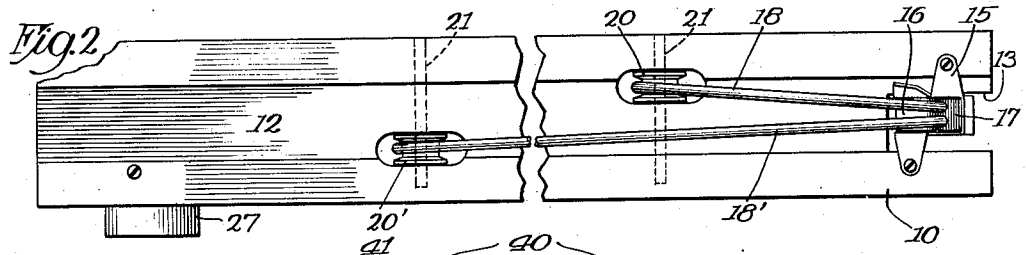


Fig. 3

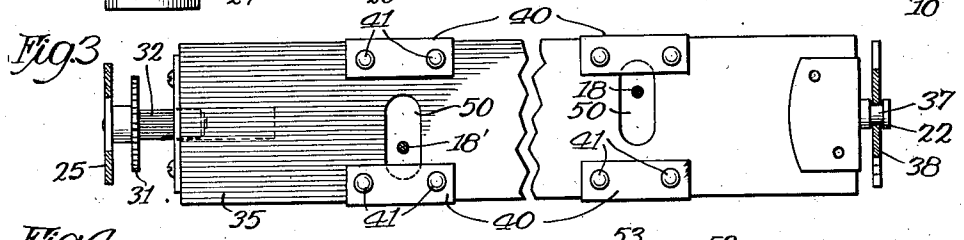


Fig. 4

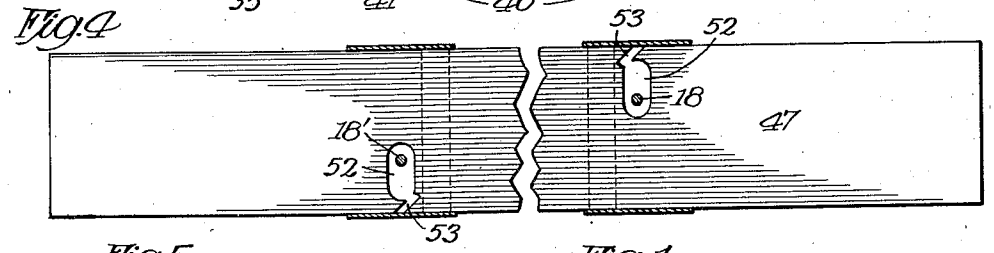


Fig. 5

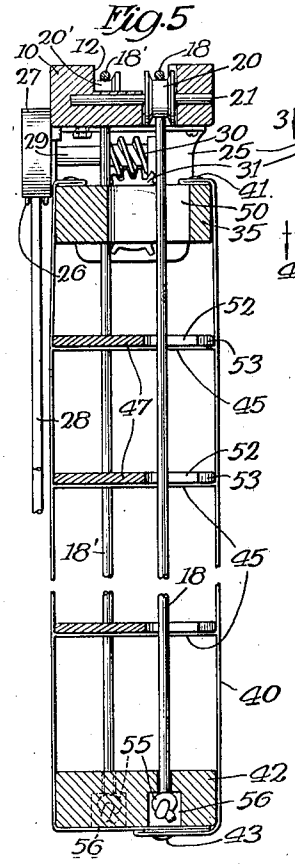
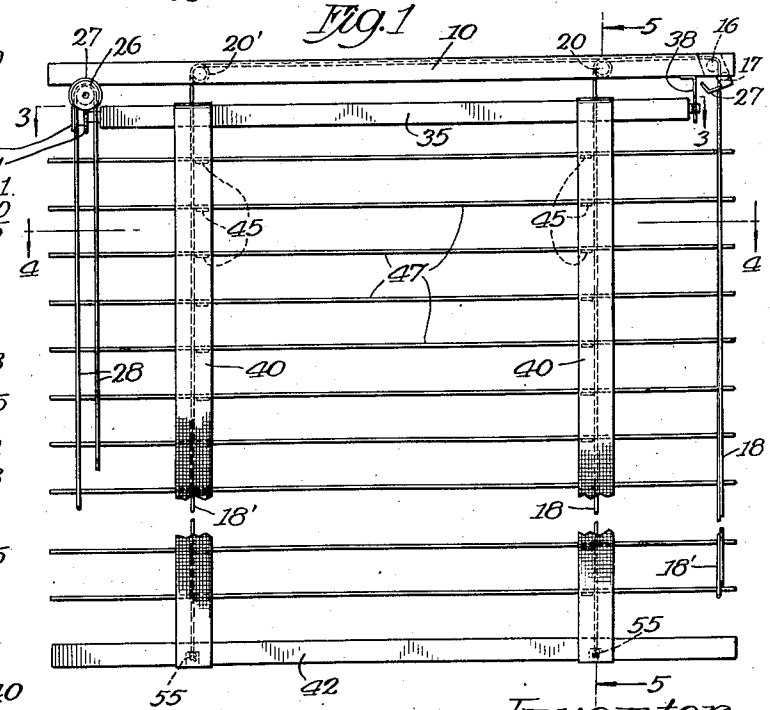


Fig. 1



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UNITED STATES PATENT OFFICE

2,194,277

VENETIAN BLIND

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Application November 12, 1936, Serial No. 110,443

6 Claims. (Cl. 156—17)

This application is in part a continuation of my copending application Serial No. 64,209, filed February 17, 1936.

My invention relates to Venetian blinds. Such devices are usually constructed of a plurality of slats formed of flat strips of wood or the like, said slats being suspended in parallel relation. The blind may be controlled as to the angle of the slats by tilting and also as to the window area covered by raising and lowering the slats from the bottom of the device.

According to the standard construction of Venetian blinds, each slat is provided with apertures for the passage of suspension ropes. The slats are not removable from the ropes, and hence the cleaning and repair of such devices are difficult and awkward, involving removal of the ropes from their pulleys and dismantling the entire blind, involving considerable time and annoyance.

An object of my invention is to provide an improved Venetian blind having slats which are individually removable from the suspending ropes by a slight movement, without the necessity of disturbing other slats or any of the gear.

A further object is to provide a blind having slats of the type referred to which will be securely carried by the ropes, in spite of their quick removability therefrom, and not easily removed therefrom by accident, as by the wind, etc.

Various other objects and advantages will become apparent as the description proceeds.

Referring now to the drawing illustrating a preferred embodiment of my invention, and forming a part of this specification:

Fig. 1 is a front elevation of a Venetian blind embodying my invention;

Fig. 2 is a top plan view thereof;

Fig. 3 is a sectional view taken substantially along the line 3—3 of Fig. 1;

Fig. 4 is a sectional view taken substantially along the line 4—4 of Fig. 1; and

Fig. 5 is a sectional view taken substantially along the line 5—5 of Fig. 1.

The numeral 10 represents a suspension board of a Venetian blind, said board being adapted to be secured adjacent a window or the like. Said board is provided with a longitudinal channel 12 in its upper surface and is notched adjacent one end as at 13. Secured to the board 10 is a bracket 15 pivotally mounting a pulley 16 over which are trained ropes 18, 18', these ropes being trained also over longitudinally spaced pulleys 20, 20' which are journalled on shafts 21, 21' on opposite sides of the channel 12. A corrugated roller 17 carried in the bracket 15 rides against the ropes 18, 18' and serves as a detent. Depending from the bracket 15 is a finger 22 separating the ropes 18, 18'.

Also attached to the board 10 is a bracket 25 (Figs. 1 and 5) which carries a pulley 26, said pulley being disposed within a protective housing 27. Threaded around said pulley 26 is a rope 28. Arranged on the shaft 29 of said pulley 26 is a worm 30 meshing with a worm wheel 31. Said worm wheel 31 is rigidly carried on a rod 32 secured to a tilt bar 35, said rod being pivotally journalled in the bracket 25. Said tilt bar 35 is also provided with a pintle 37 which is journalled in a bayonet slot formed in a depending bracket 38 secured to the underside of the suspension board 10.

Secured to the tilt bar 35 in longitudinally spaced relation is a pair of tapes 40, 40 secured to the tilt bar as by means of tacks 41 or the like, these tapes being formed of fabric of any suitable type and extending downwardly from the tilt bar 35 and around a bottom bar 42, to which they are secured as by tacks 43. Connecting the opposite sides of the tapes 40 intermediate the bars 35 and 42 are webs 45, said webs supporting slats 47.

As shown in Fig. 3, the tilt bar 35 is provided with spaced elongated apertures 50 for passage of the ropes 18, 18', said apertures 50 being not only spaced from each other longitudinally of the bar, but also staggered with reference to the edges thereof.

Referring to Fig. 4, it will be seen that the slats 47 are likewise provided with apertures 52, 52, said apertures being spaced to correspond with the apertures 50 of the tilt bar 35. Each of the apertures 52 of the slats is connected with the proximate edge of the slat 47 by means of a diagonal and preferably straight channel 53. It will be seen that the channels 53 are approximately tangential to the apertures 52 and join a corner of the aperture adjacent the proximate edge of the slat.

The ropes 18, 18' are led over the pulleys 20, 20' through the apertures 50, 50 of the tilt bar 35 and through the apertures 52, 52 of the slats and secured to the bottom bar 42 as by knots disposed in countersinks 56 (see Fig. 5).

The operation of the device will be obvious. By manipulation of the rope 28 acting on pulley 26, worm 30, and gear 31, the tilt bar 35 is rotated about its axis, thus tilting the slats 47 through the medium of the tape 40 and webs 45. By

manipulation of the ropes 18, 18' the slats are raised or lowered.

It will be seen that the slats 47 are individually detachable from the ropes 18, 18' through the slots 53. At the same time, by reason of the peculiar construction and arrangement of the slots and the notches the slats are quite secure and are not easily disengaged by accident. However, when it is desired to remove a slat for cleaning or repair, the ropes may readily be slipped out of the slots through the channels or notches 53.

Changes coming within the spirit of my invention may suggest themselves to those skilled in the art and hence I do not wish to be limited to the specific form shown or uses mentioned except to the extent indicated in the appended claims, which are to be interpreted as broadly as the state of the art will permit.

I claim:

1. In a Venetian blind, a removable slat having a pair of spaced rope receiving apertures staggered with reference to the longitudinal center line of the slat, each aperture communicating with the proximate longitudinal edge of said slat by means of a straight, oblique channel communicating with a corner of said aperture adjacent said proximate edge.

2. A Venetian blind comprising a suspension board, a bottom bar and a plurality of slats disposed between said board and bar, all of said parts collectively having only two series of apertures, supporting and manipulating mechanism for said parts, said mechanism comprising only two control strands associated with said series, one strand passing through one series and the other strand passing through the other series, said strands being disposed on opposite sides of and spaced apart longitudinally of the longitudinal axes of said slats.

3. A Venetian blind comprising a suspension board, a bottom bar and a plurality of slats disposed between said board and bar, all of said parts collectively having only two series of apertures, supporting and manipulating mechanism for said parts, said mechanism comprising only two control strands associated with said series, one strand passing through one series and the other strand passing through the other series, said strand being disposed on opposite sides of and spaced apart longitudinally of the longitudinal axes of said slats, each slat aperture being elongated and open at a longitudinal edge of said slat.

4. A Venetian blind comprising a suspension board, a bottom bar and a plurality of slats disposed between said board and bar, all of said parts collectively having only two series of apertures, supporting and manipulating mechanism for said parts, said mechanism comprising only two control strands associated with said series, one strand passing through one series and the other strand passing through the other series, said strands being disposed on opposite sides of and spaced apart longitudinally of the longitudinal axes of said slats, each slat aperture communicating with a longitudinal edge of said slat by means of an oblique slot.

5. In a Venetian blind, a removable slat having two elongated apertures for receiving control strands, said apertures being spaced apart longitudinally of and extending transverse to the longitudinal axis of the slat, said slat having slots associated with said apertures and extending from opposite longitudinal edges of said slat, each slot extending to a side of the associated aperture, said slots at said edges being substantially aligned with the longitudinal axes of said apertures.

6. In a Venetian blind, a removable slat having two elongated apertures for receiving control strands, said apertures being spaced apart longitudinally of and extending transverse to and on opposite sides of the longitudinal axis of the slat, said slat having a pair of substantially straight slots associated with said apertures and extending from the opposite longitudinal edges of said slat, each slot extending obliquely to a side of the associated aperture, said slots at said edges being substantially aligned with the longitudinal axes of said apertures.

JOHN D. FEENEY.