Dec. 15, 1936. M. L. WIENER 2,064,094

VENETIAN BLIND

Filed Feb. 23, 1935

Fig. 1

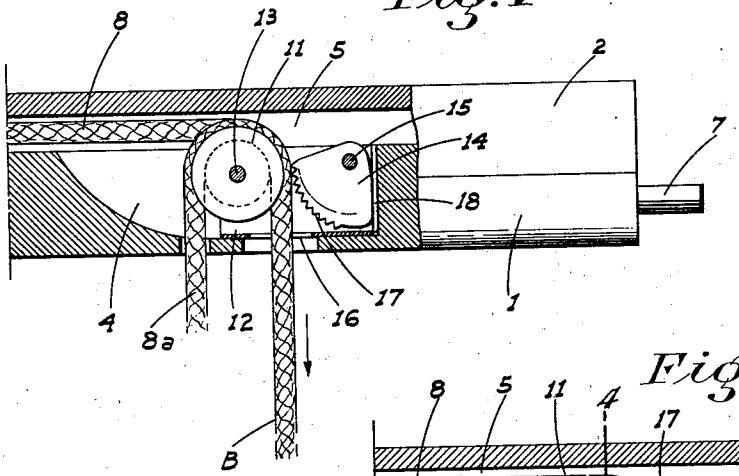


Fig. 2

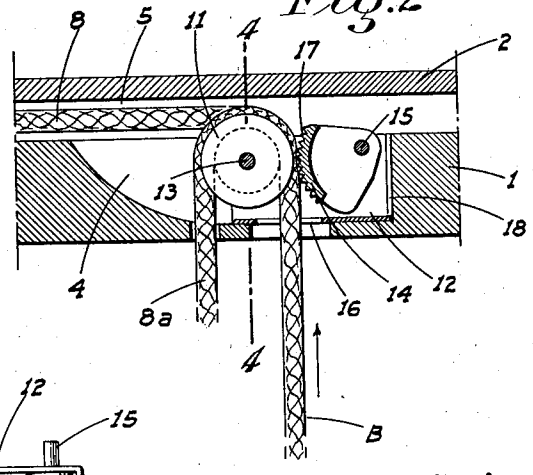


Fig. 3

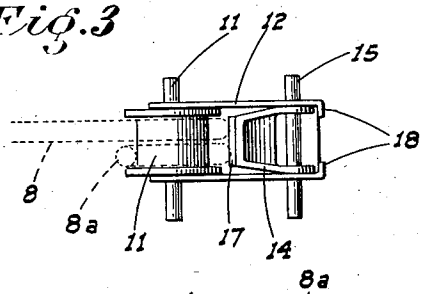


Fig. 4

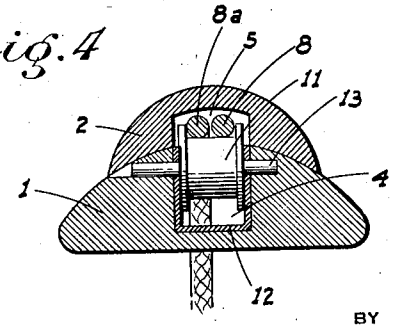
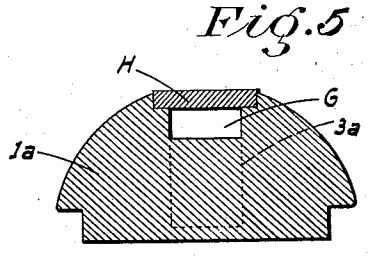


Fig. 5



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VENETIAN BLIND

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2 Claims. (Cl. 156—17)

This invention relates generally to Venetian blinds and is directed in particular to, and it is my principal object to provide, a Venetian blind having a combination head and tilt rail, said rail having an effective locking mechanism for the blind raising cords concealed therein.

Another object of my invention is to provide a Venetian blind rail structure and unitary cord locking mechanism which is capable of mass production in standard sizes.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawing similar characters of reference indicate corresponding parts in the several views:

Figures 1 and 2 are fragmentary longitudinal sections of the combination tilt and head rail illustrating the operative and non-operative positions of the holding dog.

Figure 3 is a top plan of the unit comprising the holding dog and direction changing pulley.

Figure 4 is a transverse section of the combination tilt and head rail taken on line 4—4 of Figure 2.

Figure 5 is a transverse section of a modified type of the combination tilt and head rail.

Referring now more particularly to the characters of reference on the drawing, my improved Venetian blind comprises a combination tilt and head rail, said rail comprising as a unitary member a main rail 1 having a convexly curved upper face and a smaller convexly curved rail 2 attached thereto and projecting upwardly therefrom as illustrated in Figure 4.

The main rail 1 is formed with spaced grooves in its upper face, one of which is shown at 4, while the cap rail 2 is formed with a downwardly opening longitudinal groove 5 which extends the full length of the rail.

This combination tilt and head rail, hereinafter referred to as the rail, is supported at one end from the window casing by means of a bracket (not shown) secured to the casing and which is formed with an opening into which a pin 7 rotatably and removably projects from the end of the rail. The opposite end of the rail is removably supported by blind tilting mechanism of suitable character which is secured to the window casing. The blind slats are suspended from the rail in horizontal relation by ladder tapes as is common in Venetian blind construction.

The blind raising and cord locking mechanism comprises separate blind raising cords 8 and 8a by means of which the slatted blind is controlled; the cord 8a depending through the bottom of the rail from a pulley 11 journaled in groove 4 while the cord 8 extends from pulley 11 through groove 5 in the cap rail over another similarly mounted pulley (not shown) adjacent the other end of the rail. These spaced vertically depending cords then extend through matching slots in the slats and are secured at their lower ends to the bottom rail as is usual practice. The pulley 11 is of sufficient width to receive both cords 8 and 8a and after passing over this pulley, such cords depend through the bottom of the rail and extend down therefrom as at B for manipulation in unison.

The pulley 11 is rotatably mounted in a U shaped metal case 12 in the groove 4 by means of a pin 13 which extends transversely through the upstanding sides of the metal case and into the rail at the sides of the groove. The pin thus keeps the case in place in the groove as well as serving as an axle for the pulley.

Also rotatably mounted in the case adjacent the pulley is a dog 14 pivoted on another transverse pin 15 which extends through the case into the rail at the sides of the grooves in the same manner as the pin 13. The bottom of the case is formed with two elongated and transversely spaced guide slots 16 through each one of which a blind raising cord passes. In this manner the cords are maintained in side by side relation after passing over the pulley.

The face of the dog 14 is formed with transverse cord engaging teeth 17 which are on a curve eccentric with the axis of the dog, the eccentricity increasing from top to bottom as shown in Figure 1. The sides of the case 12 at the end adjacent the dog are turned inwardly to form stops 18 for the dog when the same is in an inoperative position.

When it is desired to raise the blind and lock the same in a folded position, the cords indicated as B, are drawn downwards and in this direction of movement the teeth of the dog are disengaged from the cords as shown in Figure 1. When the blind has been folded, the cords B are moved sideways in the direction of the dog which causes the cords to engage the teeth of the dog. Then as the cords are released, the dog is drawn up clamping the cords between the dog and the pulley, as in Figure 2, thereby holding the blind in folded

and suspended relation. To release the blind, the cords are pulled down enough to allow the dog to fall into an inoperative position and the cords then held in vertical position are allowed to move upwards over the pulley without again engaging the dog.

Figure 5 illustrates a modified form of rail. This modified rail comprises a relatively thick main rail 1*a* grooved longitudinally from end to end as at G. Two relatively short deep grooves 3*a* are spaced apart as are the grooves 3 and 4 in Figure 1 for the reception of the pulleys. A thin flat strip H is recessed in the upper face of the rail above the groove G to form a cover for said groove and the cords therein.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention, what I claim as new and useful and desire to secure by Letters Patent is:

1. In a Venetian blind, a rail from which the blind slats are supported, a pulley mounted in said rail on a horizontal axis and from one side of which both blind control cords depend, said rail having a bottom opening through which the cords project, a dog mounted in the rail beyond said side of the pulley on an axis parallel to that of said pulley and adapted to swing downwardly of its own weight, stop means limiting the downward movement of the dog, and a curved cord gripping face on the dog disposed eccentric to the axis thereof and with its eccentricity increasing from the top down.

2. A structure as in claim 1, in which said bottom rail opening is elongated and extends from the adjacent side of the pulley under the adjacent portion of the dog.

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