Nov. 21, 1939. E. H. SPENARD 2,181,101

VENETIAN BLIND ATTACHMENT

Filed June 2, 1939

Fig. 1.

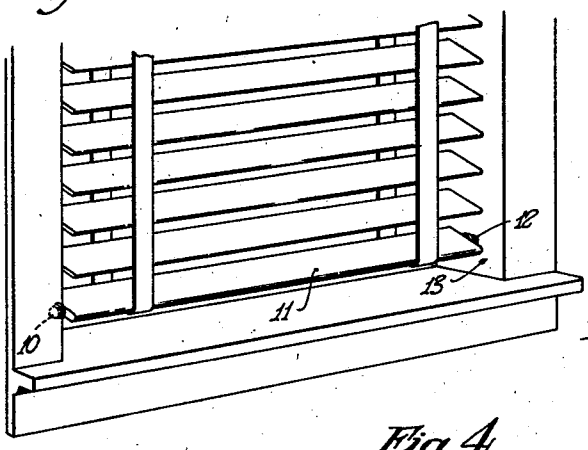


Fig. 2.

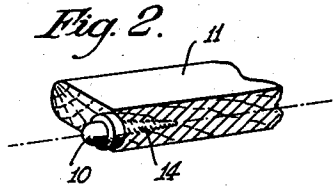


Fig. 3.

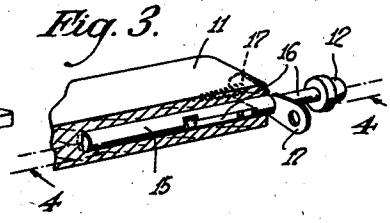


Fig. 4.

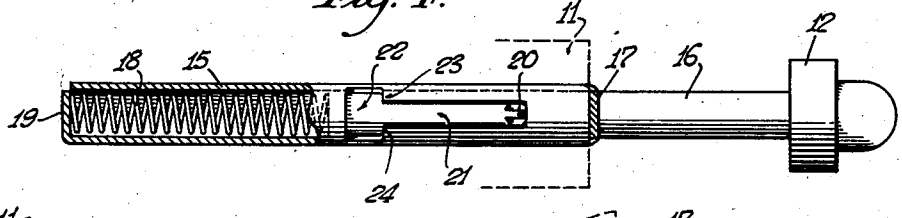


Fig. 5.

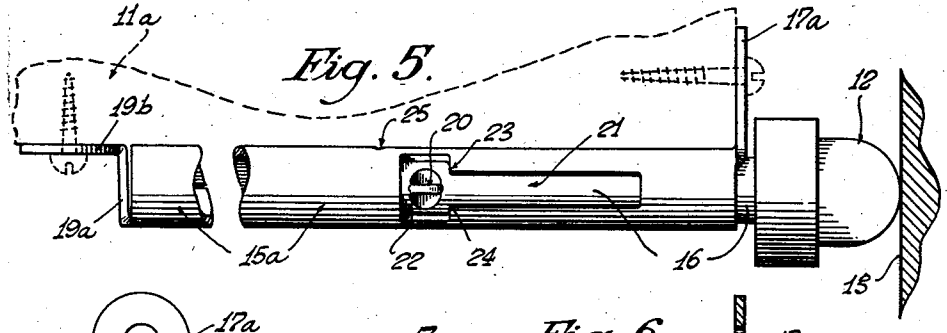


Fig. 6.

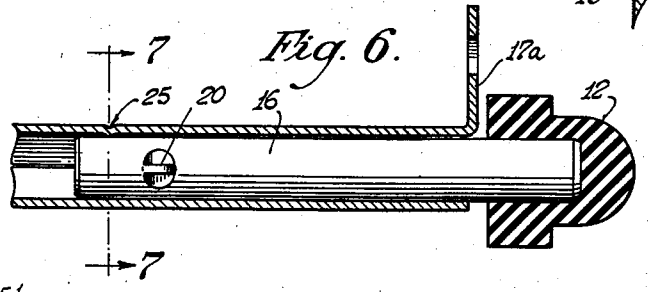


Fig. 7.

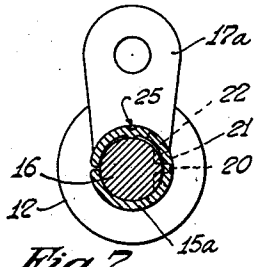
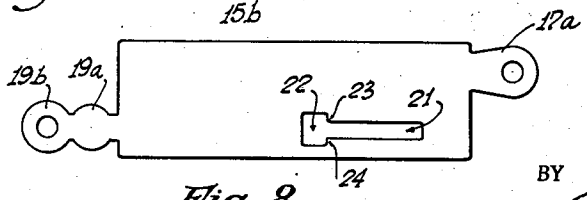


Fig. 8.



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UNITED STATES PATENT OFFICE

2,181,101

VENETIAN BLIND ATTACHMENT

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Application June 2, 1939, Serial No. 277,052

12 Claims. (Cl. 156—17)

This invention relates to an attachment for Venetian blinds, and has as its principal object the provision of means for holding the bottom rail of the blind against movement in the window casement to prevent the noise and annoyance attendant upon swinging of the blind in the wind, and to prevent injury to the finish of the blind and the casement.

Another object is the provision of a gripping or hold-down device for attachment to the bottom rail of a Venetian blind and which includes an extensible member arranged at one end of the rail to bear against the window casement and thus urge the opposite end of the rail against the opposite side of the casement to hold the bottom of the blind assembly fast, while at the same time permitting the bottom rail to tilt.

Another object is the provision of an anti-swing attachment which includes a pair of friction members arranged at opposite ends of the bottom rail of a Venetian blind, one of said members being mounted for movement in a direction longitudinally of the rail into and out of bearing engagement with the window casement and provided with means for holding the member in an adjusted bearing position against the casement with the opposite end of the rail bearing against the corresponding casement surface, the friction members being arranged and constructed to permit the usual tilting or pivotal movement of the bottom rail and hence the remainder of the slats, but nevertheless preventing displacement of the rail relative to the casement.

Yet another object is the provision in an attachment of the class described of locking means for securing the spring-urged bolt in a position of withdrawal inwardly of the rail.

A still further object is the provision of an anti-swing attachment for Venetian blinds including a bolt mounted for longitudinal movement in an end of the bottom rail and provided with spring means normally urging the same outwardly of the rail into engagement with the window casement to cause the opposite end of the bottom rail to bear against that portion of the casement opposite thereto, the bolt being provided with friction means and locking mechanism for securing the bolt in retracted position under tension, the locking mechanism being arranged so that turning movement of the rail relative to the bolt or vice versa will effect release of the bolt for bearing engagement with the casement under urgence of the spring.

Other objects and novel aspects of the invention reside in certain details of construction, as well as the arrangement and mode of operation, of the parts of the illustrative embodiment described hereinafter in view of the annexed drawing, in which:

Fig. 1 is a perspective view of the bottom portion of a mounted blind;

Figs. 2 and 3 are sectionalized perspective fragments of the opposite ends of the bottom rail of the blind with the novel attachment in place;

Fig. 4 is a plan view, partly in section, of the spring-urged gripper as seen from line 4—4 of Fig. 3;

Fig. 5 is a plan view of the friction type gripper;

Fig. 6 is a longitudinal section through the device of Fig. 5;

Fig. 7 is a transverse section along line 7—7 of Fig. 6; and

Fig. 8 is a plan view of a blank or stamping for the bolt sleeve.

Various expediences have been resorted to heretofore in holding down the bottom rail of Venetian blinds to prevent the blinds swaying in the wind, such expediencies including hooks, weights, and shackles of various kinds which are unsatisfactory for one reason or another and which have never come into general favor or use.

The present invention provides a simple and highly efficient means for accomplishing the intended object, said means including, as depicted in Fig. 1, the provision of a knob-like contact member 10 at one end of the bottom rail 11 of the usual Venetian blind, and a longitudinally extensible contact or bearing member 12 arranged at the opposite end of the bottom rail for movement away from the rail toward and into bearing engagement with the inner face 13 of the usual window casement, the bearing of the member 12 against the casement shifting the rail 11 longitudinally so that the opposite contact member 10 will bear against the casement portion opposite thereto.

One of the gripping attachments 10 may preferably be in the form of a rubber knob formed on the end of a wood screw 14 which is adapted to be threaded into one end of the bottom rail 11. For convenience, the member 10 may be designated as the stationary or fixed gripping member, and the opposite gripping member 12 being designated as the movable or adjustable gripping member.

The adjustable gripping member includes a mounting sleeve 15 with an interfitting bolt 16 on the outer end of which the friction or contact member 12 is secured, said member being pref-

erably of rubber and shaped as shown so that the contact surface thereof is curved or spherical for a minimized or approximately "point" contact with the window casement. In the form shown in Fig. 3, the sleeve 15 is mounted in a bore drilled in the end of the rail 11, the sleeve having opposite wings 17 apertured to receive mounting screws which are threaded into the end of the rail to secure the sleeve in position.

In the arrangement of Fig. 4, the sleeve 15 is provided with an internal spring 18 which bears against the inner end of the bolt at one of its ends and against an upset end flange 19 on the sleeve to urge the bolt outwardly and project the contact or friction knob 12 against the casement. The outward movement of the bolt is limited by a pinch 20 formed on the side of the bolt and which moves in a longitudinally extensive slot 21 in the sleeve. The inner end of the slot is enlarged as at 22 to provide opposite locking shoulders 23 and 24 against which the pinch 20 may bear when the bolt is retracted to position the pinch opposite the enlarged portion 22 and subsequently turn in either direction to position the pinch opposite one or the other of the shoulders. The type of gripper shown in Fig. 4 is especially intended for inside mounting, that is, to fit within a bore drilled in the end of the bottom rail as shown in Fig. 3.

In the modified embodiment of Fig. 5, the sleeve 15*a* is similar in most respects to that described in view of Fig. 4, the difference being that the endwise flange 19*a* has an offset extension 19*b* which constitutes a mounting bracket adapted to rest against the under surface of the bottom rail 11*a* and instead of the mounting wings 17, the opposite end of the sleeve is provided with a lateral arm 17*a* (Fig. 7) adapted to fit flush against the end of the rail and through which a mounting screw is passed. In other respects, the device of Fig. 5 may be identical with that shown in Fig. 4.

It will be observed in the modification of Fig. 5 that the spring 18 has been omitted from the bore of the sleeve. In order to hold the bolt in positions of adjustment and particularly in bearing engagement with the casement, the sleeve is provided with a punch 25 (Fig. 6 also) which provides a friction boss on the inner periphery of the sleeve and bearing against the bolt 16, the arrangement being such that the bolt will be held in any adjusted position against the ordinary forces exerted by wind or the like against the blind. This friction type of gripper may be mounted internally of the rail in the manner shown in Fig. 3, or externally thereof as shown in Fig. 5. The internal type of mounting is preferred where the blinds are equipped with the grippers at the time of manufacture, the outside mounting being employed where the device is sold as an attachment.

The mounting sleeves 15 are conveniently struck up from a metal blank 15*b* such as shown in Fig. 8.

In the use of the spring type gripper of Fig. 4, the bolt is normally extended under urgence of the spring and in order to release the bottom rail for raising or lowering movement, it is merely necessary to grasp the same and urge the rail toward the casement to compress the spring, at the same time exerting a slight turning effort on the rail so as to cause the pinch 20 to work into the widened slot portion 22, whereupon the bolt will be retracted and automatically locked so that by continued movement of the rail the same may be manipulated as desired.

Conversely, when it is desired to secure the rail against movement it may be shifted to cause the friction knob 12 to bear against the casement, a slight turning effort being applied to the rail at the same time so that the pinch may work out of the locking notch and free the bolt for movement by the spring into bearing engagement with the casement, whereupon the rail is automatically secured against casual movement. The rounded contact surface portions on the friction knobs 12 are especially suitable in permitting pivotal movement of the rail during tilting of the slats, the frictional contact afforded by the knobs nevertheless being adequate to effect a slight turning of the bolt rods or plungers in the latching or unlatching operations heretofore described.

The objects and advantages of the invention may be realized in other forms of construction, and the invention is not to be limited to any of the details specified herein except as may be provided in the appended claims.

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

1. The combination, with the bottom rail of a Venetian blind, of hold-down means including casement engaging members at opposite ends of said rail, at least one of said members being extensible along an axis extending longitudinally of the rail for movement into and out of gripping engagement with the casement, said extensible member being provided with locking means arranged to lock the same into a desired position by rotative movement of said extensible member relative to its axis of extension, said member being further arranged and constructed to be turned into and out of locked position by turning movement of said bottom rail about its own long axis when said last-mentioned extensible member is pressed into engagement with the casement.

2. A hold-down attachment for use with the bottom rail of a Venetian blind, said attachment including a casement engaging device adapted for mounting at an end of said rail and including a gripping member which is extensible along an axis substantially parallel with the length of said rail for movement into and out of engagement with the casement, and means operable by turning movement of said extensible member relative to said axis for locking the member into a certain position of extension, and means on said extensible member for engagement with a casement to permit rocking movement of the same and said bottom rail in tilting operations of the blind and effective when pressed against said casement by longitudinal pressure applied to said rail to urge said gripping member against the casement, to prevent turning movement of said extensible member for locking operation of the same when said bottom rail is turned about its own axis during longitudinal displacement as aforesaid.

3. The combination, with the bottom rail of a Venetian blind, of hold-down mechanism adapted for attachment at an end of said rail and including a mounting member adapted for attachment at an end of said rail, and an extensible casement gripping member arranged for movement in said mounting member longitudinally of the rail into and out of gripping engagement and arranged to turn about an axis parallel to the length of said rail, coacting locking means on said mounting and extensible members operable by turning movement of one relative to the

other to lock or unlock said extensible member in a certain position of extension, and casement gripping means at an end of said extensible member and effective to hold the same against turning movement when pressed against the casement by longitudinally directed pressure on said bottom rail, turning movement of the bottom rail being effective to turn said mounting member relative to said extensible member for locking or unlocking operation of said locking means depending upon the direction in which the bottom rail is turned.

4. The combination, with the bottom rail of a Venetian blind, of hold-down means including casement engaging members arranged at opposite ends of said rail, at least one of said members including a mounting member and a casement engaging member mounted in said mounting member for extension longitudinally of the rail into and out of bearing engagement with the casement, said extensible member also being arranged for turning movement in said mounting member about an axis parallel with the length of the rail, cooperating locking means on the extensible and mounting members and operable to lock said extensible member into a certain position of extension by relative turning movement of the mounting and extensible members, and casement engaging means at an end of said extensible member and effective to hold the latter against turning movement when the extensible member is urged to press said casement engaging member against the casement, whereby simultaneous rocking of said bottom rail in one or the other direction will correspondingly move the mounting member relative to the extensible member to lock or unlock said locking means.

5. The combination, with the bottom rail of a Venetian blind, of hold-down means including casement engaging members at opposite ends of said rail, at least one of said members being extensible longitudinally of the rail for movement into and out of bearing engagement with a casement, a sleeve member mounting said extensible member on the rail for movement as aforesaid, spring means normally urging said extensible member outwardly of the mounting member for engagement with a casement, means limiting the outward movement of said extensible member, means at an end of said extensible member for frictional engagement with said casement, coacting locking means on said extensible member and sleeve and operable by relative turning movement of the sleeve and extensible member to latch the latter into retracted position, said casement engaging means on the end of said extensible member being arranged and constructed to hold the extensible member against turning movement when said bottom rail is also pressed in the direction of its length to urge said casement engaging means firmly against the casement.

6. A hold-down attachment for use with Venetian blinds, said attachment including a sleeve member adapted to be mounted at an end of a bottom rail with its bore extending in the direction of the length of said rail, a casement engaging member slidable in said sleeve for movement into and out of bearing engagement with a casement opposite an end of the rail, and locking means for said casement engaging member and including a projection on the side of said member arranged to work in a longitudinally directed slot in said sleeve responsive to movement of said member inwardly and outwardly of said sleeve, said slot having a circumferentially offset portion into which said projection may be moved by turning the casement engaging member in the sleeve to lock said member against sliding movement.

7. A hold-down attachment for use with Venetian blinds, said attachment including a sleeve member adapted to be mounted at an end of a bottom rail with its bore extending in the direction of the length of said rail, a casement engaging member slidable in said sleeve for movement into and out of bearing engagement with a casement opposite an end of the rail, and locking means for said casement engaging member and including a projection on the side of said member arranged to work in a longitudinally directed slot in said sleeve responsive to movement of said member inwardly and outwardly of said sleeve, said slot having a circumferentially offset portion into which said projection may be moved by turning the casement engaging member in the sleeve to lock said member against sliding movement, and means at an end of said casement engaging member for frictionally engaging the casement to hold said engaging member against turning movement relative to the sleeve by pressure urging said frictional casement engaging means against the casement, whereby the mounting sleeve may be turned with said bottom rail to effect movement of said projection into and out of said offset notch depending upon the direction in which the rail is turned.

8. A hold-down attachment for use with the bottom rail of a Venetian blind, said attachment including an elongated sleeve adapted to be mounted on said rail with its bore extending in the direction of the length of the rail, an elongated member slidable in said sleeve longitudinally toward and away from said rail for engagement with a casement, said elongated member also being arranged to turn in said sleeve, cooperating latching means on said sleeve and elongated member for latching the latter in a certain position in said sleeve, said means being operable by relative turning movement of the sleeve and elongated member, and means at the end of said elongated member for frictional engagement with said casement to hold said elongated member against turning movement when said bottom rail is urged toward said casement to urge said frictional engaging means firmly against the same, said rail being rocked in opposite directions when the frictional means is engaged as aforesaid to turn said sleeve relative to the elongated member for latching and unlatching movement of said latching means dependent upon the direction in which the rail is rocked.

9. A hold-down attachment for use with Venetian blinds, said attachment including a sleeve adapted to fit into a bore in an end of a blind rail, said sleeve having an offset mounting ear positioned to fit against the end of said rail adjoining said bore, a plunger slidable in said sleeve in a direction longitudinally toward and away from said end of the rail, means at an outer end of said plunger for frictionally engaging a window casement, and latch means for said plunger including a longitudinally extensive slot in said sleeve, an outwardly projecting member on said plunger working in said slot when the plunger is moved inwardly and outwardly of the sleeve, said slot having a transversely enlarged notch portion at its end remote from said end of the rail and into which said projecting member on the plunger may be disposed by turning the

plunger relative to the sleeve to latch the plunger against movement longitudinally of the sleeve.

10. A hold-down attachment for use with Venetian blinds, said attachment including a sleeve adapted to fit into a bore in an end of a blind rail, said sleeve having an offset mounting ear positioned to fit against the end of said rail adjoining said bore, a plunger slidable in said sleeve in a direction longitudinally toward and away from said end of the rail, means at an outer end of said plunger for frictionally engaging a window casement, and latch means for said plunger including a longitudinally extensive slot in said sleeve, an outwardly projecting member on said plunger working in said slot when the plunger is moved inwardly and outwardly of the sleeve, said slot having a transversely enlarged notch portion at its end remote from said end of the rail and into which said projecting member on the plunger may be disposed by turning the plunger relative to the sleeve to latch the plunger against movement longitudinally of the sleeve, and spring means in said sleeve and normally urging said plunger outwardly thereof toward said casement.

11. A hold-down attachment for use with Venetian blinds, said attachment including a sleeve member having a laterally offset mounting lug at one of its ends and adapted to fit flush against an end of the bottom rail in said blind, said sleeve at its opposite end having a lug disposed at an angle to said first-mentioned lug to fit against the bottom of said rail, means being extended through said lugs into engagement with the rail to mount said sleeve on the underside thereof and adjacent an end thereof, a plunger slidable in said sleeve in the direction of the length of the rail, casement engaging means at an end of said plunger, and means on said sleeve cooperable with said plunger to secure the latter in retracted position within the sleeve.

12. In a hold-down device of the class described, a plunger and means adapted to be secured to a blind rail and mounting said plunger for both turning and longitudinal movement relative to an axis parallel with the length of said rail, spring means normally urging said plunger longitudinally away from an end of said rail for engagement with a casement, said plunger being movable into a retracted position inwardly of said end of the rail by pressing the latter toward said casement, and means for latching said plunger in retracted position, when the plunger is turned into a certain position relative to said mounting means, together with means on said plunger for engaging said casement when the rail is pressed as aforesaid to prevent turning of the plunger relative to said mounting means and rail so that the rail and mounting means may be turned relative to the plunger for operation of said latching means.

ELMER H. SPENARD.