April 10, 1934. A. G. LYONS 1,954,739

TRANSOM LIFTER

Filed June 11, 1932

FIG. 1.

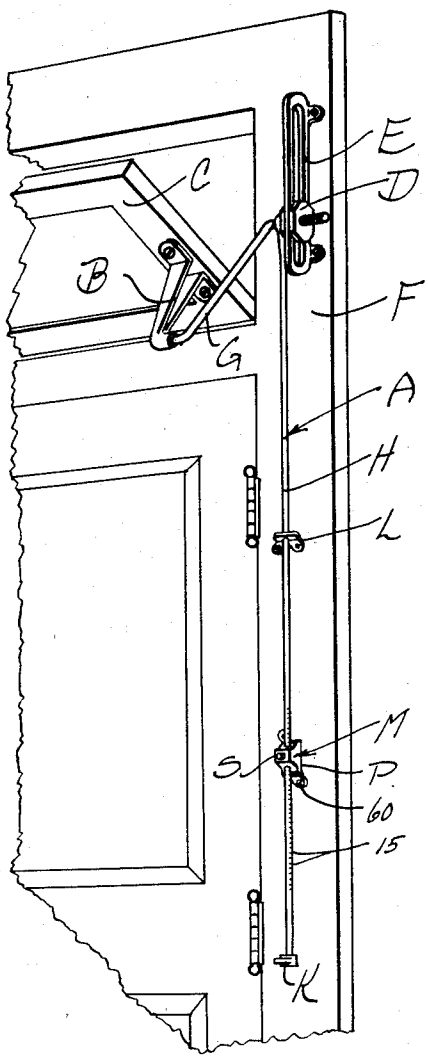


FIG. 2.

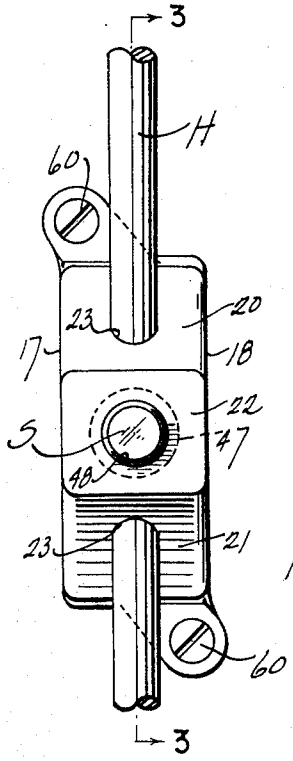


FIG. 3.

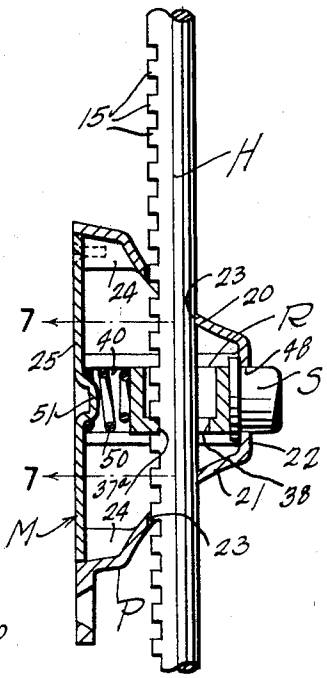


FIG. 4.

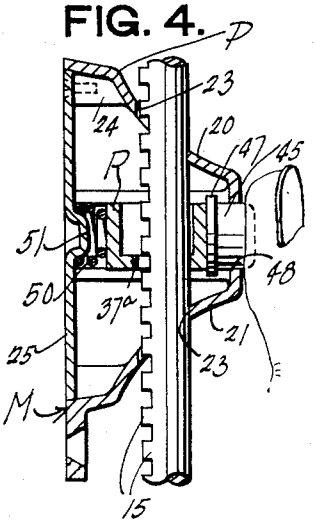


FIG. 5.

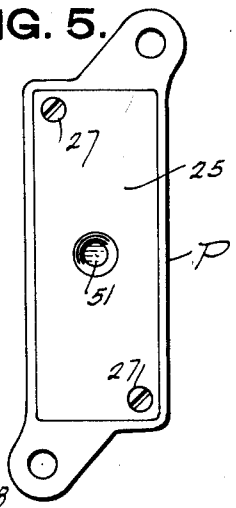


FIG. 6.

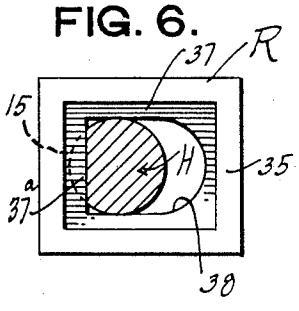
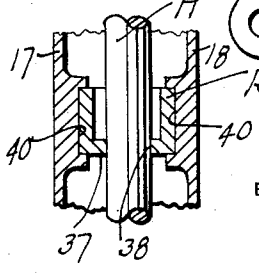


FIG. 7.



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Patented Apr. 10, 1934 1,954,739

UNITED STATES PATENT OFFICE

1,954,739

TRANSOM LIFTER

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Application June 11, 1932, Serial No. 616,700

1 Claim. (Cl. 292—305)

This invention relates to improvements in transom lifters and improved means for maintaining a transom or other closure in a predetermined opened or closed locked position.

The primary object of the invention is the provision of a relatively simple and improved transom lift mechanism which includes a positive detent device manually operated and engageable with a rack upon the lift rod of the transom lifter so that the transom or other closure may be maintained in a positive opened or closed position against liability of accidental or unauthorized movement therefrom.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the accompanying drawing, forming a part of this specification, and wherein similar reference characters designate corresponding parts throughout the several views,

Figure 1 is a perspective view of the improved transom lifter, showing more particularly the improved detent for locking the transom in the desired position.

Figure 2 is a front view of the improved detent.

Figure 3 is a cross sectional view taken substantially on the line 3—3 of Figure 2.

Figure 4 is a view similar to Figure 3, but showing an operator pressing the push button for releasing the detent block, so that the transom lift rod may be moved upwardly or downwardly to the detent.

Figure 5 is a rear view of the casing structure of the improved detent.

Figure 6 is a plan view of the detent block showing it in its locking relation with the transom lift rod.

Figure 7 is a cross sectional view taken substantially on the line 7—7 of Figure 3.

In the drawing, wherein for the purpose of illustration is shown only a preferred embodiment of the invention, the letter A may generally designate the improved transom lift mechanism which may include a bracket B for direct attachment to the closure or transom C. The usual slide block D is slidably mounted in a guide bracket E mounted upon the door frame or wall F; a connecting link G connecting the slide block with the bracket B in the usual manner. An improved lift rod H is provided, having the usual thumb piece K at the lower end thereof, and being guided by the usual wall guide bracket L. An improved manually operated detent mechanism M is provided for positively holding and locking the lift rod H in a predetermined position against unauthorized or accidental movement.

The detent mechanism M preferably includes a casing P having a spring actuated detent block R therein cooperatively associated with a push button S in order to permit the detent block R to be moved into and out of locking association with the lift rod H.

The transom lift rod H upon the longitudinal edge thereof facing the wall or frame F of the door or closure is provided with a plurality of rack teeth 15; these rack teeth being formed by grooving the round rod H as shown in Figures 3 and 6 for a distance considerably less than one-half of the diameter of the rod, so that the teeth 15 are segmental in shape.

The casing P of the detent device M is preferably a casting and includes preferably parallel side walls 17 and 18, and top and bottom side walls 20 and 21 which converge forwardly and terminate in a substantially rectangular shaped front wall 22 disposed in a plane at right angles to the side walls 17 and 18. The convergent upper and lower walls 20 and 21 are apertured at 23 for slidably receiving the rod H therethrough in a free sliding relation. Upper and lower bosses 24 are provided in the casing, with tapped openings facing rearwardly. A rectangular shaped rear cover 25 seats in a countersunk relation in the rear of the casing. Screws 27 extend through openings in the cover 25 for screw threading into the tapped openings of the bosses 24 to hold the cover in place.

The lock block or detent member R, shown in the various views of the drawing, comprises a polygonal shaped body 35, either square or rectangular and open at the top. The lower edges of the walls defining the body 35 are inwardly flanged at 37 to provide an opening 38 thru which the lift rod H slips. It is of sufficient width to permit the rod H to slip therethrough without lateral play, and is elongated so that the flange portion 37^a acts as a detent tooth for slipping into the spaces between the teeth 15 of the lift rod H. The lock block or detent member R is of uniform height and is slidably received within suitable trackways 40 provided upon the inner surfaces of the side walls 17 and 18; these walls having raised portions which are grooved to provide the trackways 40. These grooves are open at the rear of the casing to permit the detachable sliding of the block R in place so as to align the opening therethrough with the openings 23 so as to permit the assemblage of the detent device M upon the lift rod.

The thumb piece S is a preferably separate piece with respect to the block R and consists of the cylindrical shaped head portion 45 having an annular flange 47; the head 45 being slipped through a circular opening 48 in the front wall 22 of the casing P, and the flange 47 resting against the inner surface of the front wall 22 surrounding the circular opening 48. Of course the block R is shoved against the inner surface of the push button S.

A spiral compression spring 50 is mounted within the casing, being centered upon a boss 51 which is stamped or formed upon the inner surface of the closure 25, so that the spring 50 is in engagement at its opposite end against the block R and forces the latter into the position shown in Figure 3 with the detent tooth 37a thereof in engagement with the rack portion of the lift rod H.

The transom lifter is assembled, as to conventional details, in a manner which is well known and the detent device M is assembled upon the lift rod, and the casing P secured against the jamb or wall by means of screws 60 engaging thru suitable upper and lower ears of the casing to hold the latter in stationary or fixed position. Normally, the spring 50 urges the lock block into locking engagement with the rack of the lift rod, as shown in Figure 3. To release the lift rod H in order to permit an operator to grasp the thumb piece K and move it upwardly or downwardly for actuating the closure C, it is merely necessary to depress the bush button S as shown in Figure 4. This pushes the tooth 37a of the detent block R out of engagement between the teeth of the rack portion of the lift rod H, so that the latter may be moved upwardly or downwardly. When the transom has been adjusted to the desired position the operator merely by release of the push button permits the spring 50 to throw the lock block or detent block R into rack engaging position with the lift rod H, as shown in Figure 3. In this position it will be impossible to move the lift rod H downwardly or upwardly, since it is positively held against such movement, and does not depend solely upon friction, as is the case with the usual transom lifter rods.

All of the parts of the improved detent device are relatively simple, and may be assembled with facility in the casing P, or removed therefrom.

From the foregoing description of this invention it is apparent that an improved transom lifter has been provided, which includes an improved detent mechanism capable of eliminating the functional defects in ordinary transom lifters. It is well known to those skilled in the art that the friction plates which hold the conventional lift rods in place wear, as does the rod, and fail to perform their intended functions of holding the rod. With the present invention the lift rod will be locked, and it will be impossible, for instance, for an intruder exerting force on the transom, from the outside, to dislodge the lock block and gain entrance through the transom.

Various changes in the shape, size, and arrangement of parts may be made to the form of invention herein shown and described, without departing from the spirit of the invention or the scope of the claim.

I claim:

In a detent device for closure regulating rods the combination of a hollowed casing the compartment of which is entirely open at the rear and including a front wall and surrounding walls, said casing being apertured in aligning relation at opposed points in said surrounding walls for receiving a regulating rod therethrough, the inside of said surrounding walls at opposite sides of the axis of the regulating rod when extended through the said wall openings having guide ribs projecting into the compartment, said guide ribs being grooved to provide trackways, a substantially box-shaped detent slidable in said grooves and removable through the rear of the casing, said box-shaped detent having a wall with an elongated regulating rod receiving opening aligning with the openings of the casing, said opening of the detent being elongated in parallelism between the guideways and having a tooth at one end thereof engageable with the regulating rod, a closure for entirely covering the rear of the casing detachably connected therewith, said cover having a projection on the inner side thereof centralized between the guide grooves, a coil spring centered upon said projection and compressed between said closure and the detent for forcing the tooth of the latter against the regulating rod, the front wall of the casing having an opening therein, and a push button in said opening having a flanged inner end resting against the detent and urged by said spring against the inner surface of the front wall.

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