

Dec. 30, 1969

D. L. CRUM

3,486,781

SLIDING CLOSURE LOCK

Filed Feb. 1, 1968

2 Sheets-Sheet 1

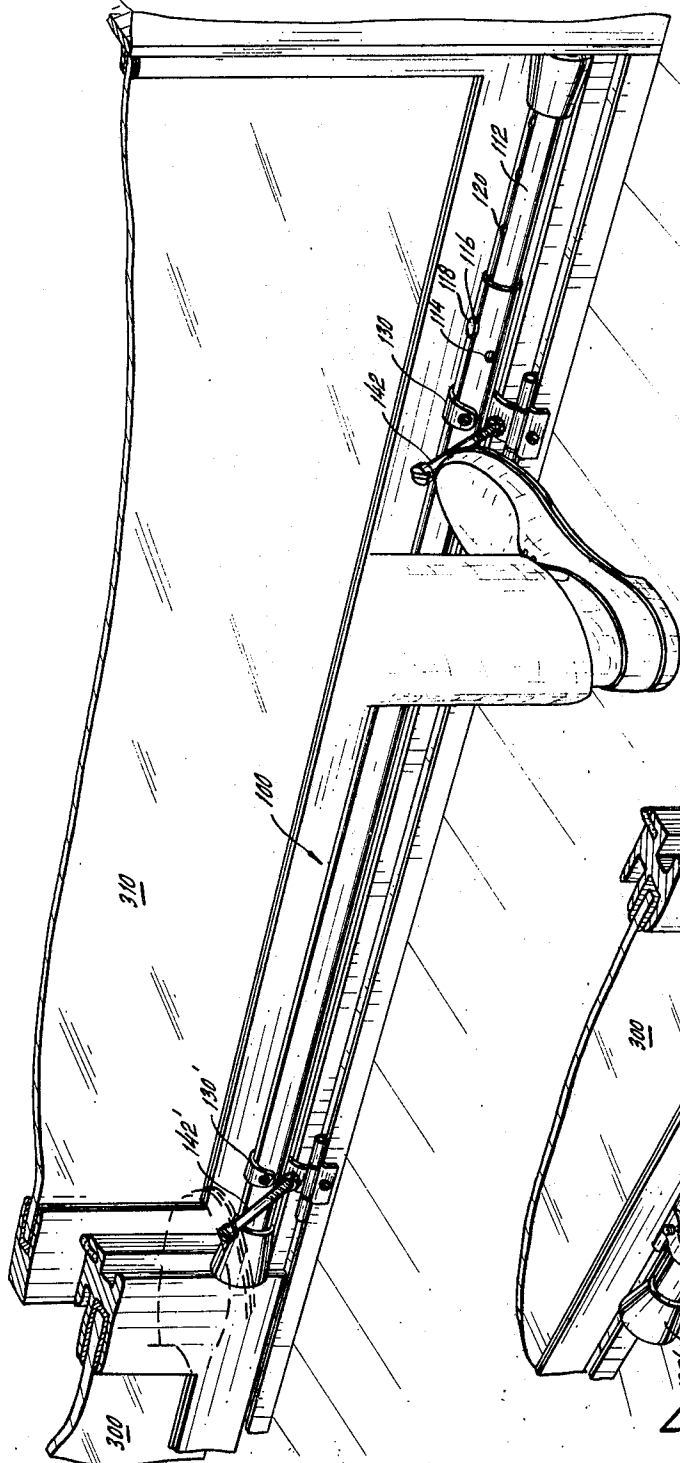


FIG. 1

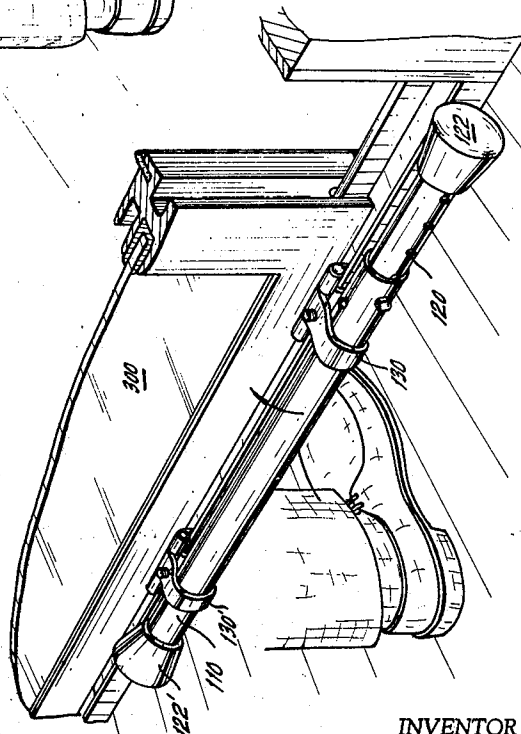


FIG. 2

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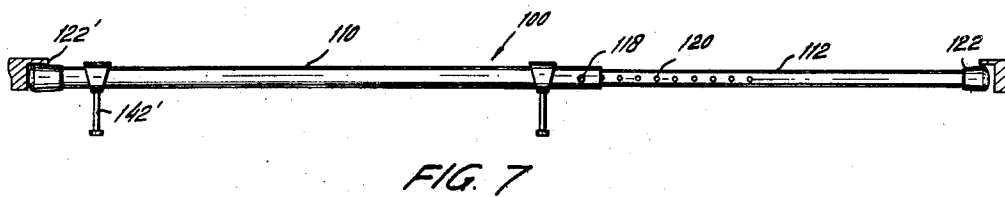
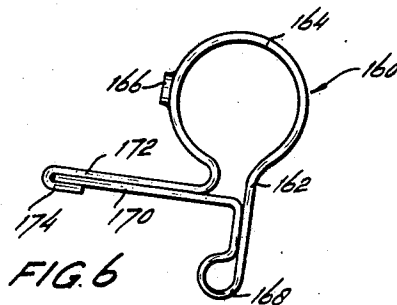
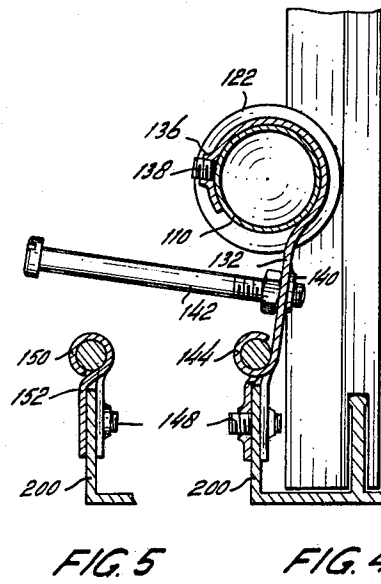
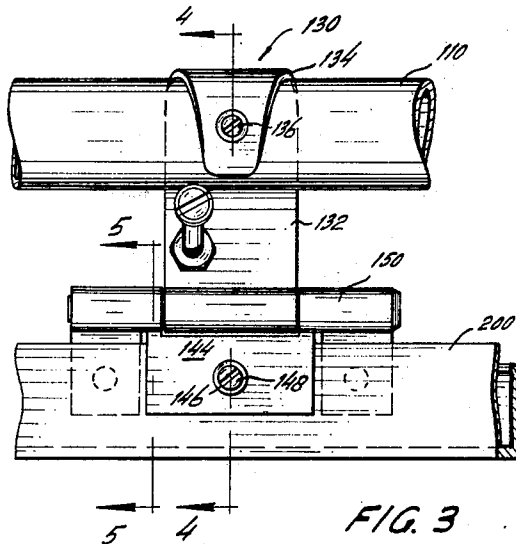
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SLIDING CLOSURE LOCK

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6 Claims

ABSTRACT OF THE DISCLOSURE

The present invention comprises a positive means for locking sliding closures against undesirable opening. It is especially useful in double track enclosures wherein the slidable elements may overlap each other. The closure lock may be opened and closed by foot control and is adapted to varying position and adjustability, dependent upon the size and positioning of the sliding door with respect to the jamb. It is also adapted to seat itself adjacent the most effectively reinforced portion of the closure, namely at the bottom.

BACKGROUND OF THE INVENTION

The field of invention is such as to encompass security of any closures such as sliding doors, sliding windows, rigid curtains and the like. The known prior art includes conventional latching between corresponding ends of overlapping movable closures and also what is known as a pivoted "Charley bar," all unsatisfactory as either because readily compromised or poorly arranged, considering storage space requirements for the closures when in the open position.

SUMMARY OF THE INVENTION

The invention may be summarized as comprising a semi-rigid lock aligned obstruction for sliding doors and related closures, whereby the lock may be secured to a portion of the sill without modification thereto, said locking means being handily stored out of the path of the sliding door when not in use.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is an isometric view of invention, installed, and indicating the position of "lock" with respect to the one element of the closure;

FIG. 2 is a similar view of invention showing the storage position thereof as a closure may be opened;

FIG. 3 is a front elevation view of a fragment of invention illustrating at least one of the hinge and its relation to the sill;

FIG. 4 is a sectional view of the FIG. 3 showing, taken along the lines 4-4 thereof;

FIG. 5 is a vertical sectional view of the FIG. 3 concept, taken along the lines 5-5 thereof;

FIG. 6 is an end view of the upper hinge portion of FIG. 3, excluding the locking bar and revealing a modification in the invention;

FIG. 7 is a top plan view of basic invention, shown in FIGS. 1 and 2 respectively.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to FIGS. 1 through 4 inclusive and FIG. 7, it will be noted that the lock system 100 comprises the rigid tubular housing 110 and its corresponding adjustable extension 112. The extension 112 has apertures 120 corresponding for locking registry respectively with the gauged apertures 114 and 116, the same being

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adapted to locking via the pin 118. The pin 118 may be adapted to alternate positioning within the respective apertures 114 and 116 to effect the full measure of adjustment between the apertures 120 or an half measure thereof if said pin is altered in positioning to the aperture 114.

The telescoping elements 110 and 112 are respectively terminated by cushions 122 and 122', said cushions being oppositely adapted to the respective fixed jamb and movable end of the closure 300, when the lock is positioned as in FIG. 1. Securing the tubular element 110 against displacement, there is provided the hingedly mounted projection 130, said projection comprising shank 132 and curvilinear extension 134, said extension 134 engaging the tubular element 110 by means of the combination aperture 136 and set screw 138, reference FIG. 4. The combination 130 includes, as well, the lifting and closing stud 142 which said stud is seated in the aperture 140, adjustably for extension or retraction, considering the requirements in resting the lock on the floor as in FIG. 2, sufficiently high so that the user may easily engage the device for lifting as in FIG. 2 or for kicking out of registry. (Reference phantom lines FIG. 1) The assembly 130 includes in the shank 132, means for seating the hinge pin, unnumbered, in alignment with the corresponding portions of offset stabilizers 150 which are adapted to engage opposed walls of the sill element 200 for locking engagement between the respective elements 144 via the combination aperture 146 and set screw 148. A related and opposite combination may be adapted to the elements 150 for locking same in registry with the sill 200, reference FIGS. 4 and 5.

Referring now to FIG. 6, it will be noted that the anchor-hinge assembly 160 comprises a modification of the hinge assembly 130, aforesaid, the modified hinge assembly 160 including a blank from which the arcuate portion 164 may be seen to engage an exterior tubular member such as 110, having aperture means 166 for accommodating an appropriate set screw to engage the tubular member, not shown. Said hinge assembly 160 includes an extension 172 having a portion 174 bent upon itself to engage the corresponding extension 170 of the shank 162, said extension 170 comprising together with the extension 172 a stud for kicking the lock bar into and out of position, being in effect a lever for the hinge pivot 168. Hinge bar and opposed hinge elements 144 are not shown herein.

These and other modifications which will be apparent from the foregoing description provide the essentials of invention.

I claim:

1. In a sliding closure structure of a type including a fixed closure housing defining a closure opening and a slidable closure member movable with respect thereto to open and closed positions, a bar lock for coacting with the housing and slidable closure member to restrict opening movement of said slidable closure member to a fixed position, comprising:

- (A) a first member attached to said housing at a side edge thereof,
- (B) an elongated second member hingedly connected at an end thereof to said first member,
- (C) a rigid bar connected to the free end of said second member in transversely spaced parallel alignment with respect to said housing side edge, said bar and said second member being mounted for unitary rotatable movement in a plane perpendicular to the plane of said housing side edge while maintaining said alignment, for substantial aligned registry into and out of locking position with respect to at least one end portion of said slidable closure member.

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2. The device of claim 1, further comprising an adjustable coaxial extension of said bar, said extension being movable with said bar to a locking position adjacent a fixed portion of the closure housing.

3. The device of claim 1 wherein the bar lock includes a bar lifting and depression stud extending from and movable with said second member.

4. The device of claim 2 wherein the bar lock includes a bar lifting and depression stud extending from and movable with said second member.

5. The device of claim 3 wherein said second member includes a bar engaging arcuately shaped clasp portion.

6. The device of claim 5 in which the bar lifting and depression stud is formed as a projecting portion of said second member.

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U.S. Cl. X.R.

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