E. R. SUBROYAR.

DOOR AND WINDOW ADJUSTER.

APPLICATION FILED JUNE 4, 1920.

1,386,740.

Patented Aug. 9, 1921.

3 SHEETS—SHEET 1.

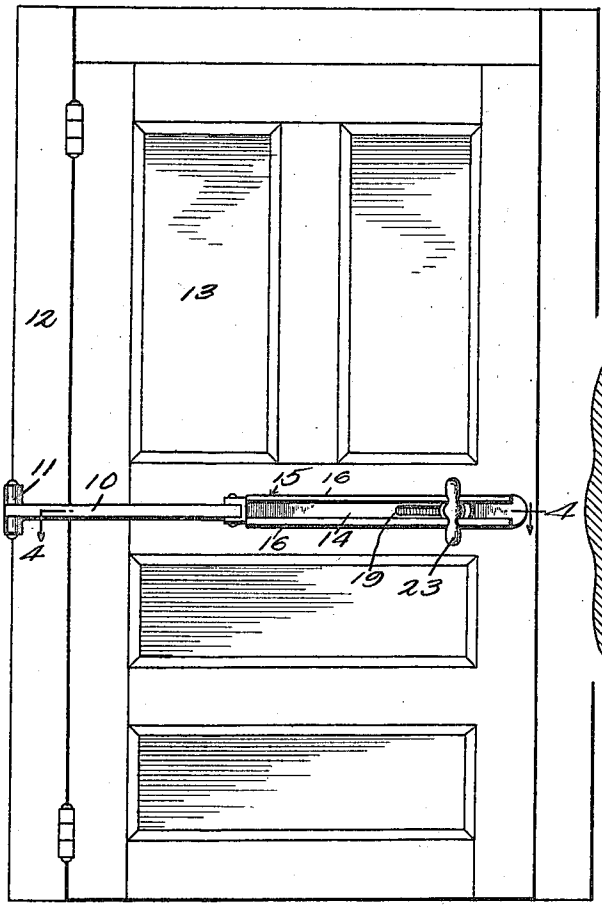


Fig. 1

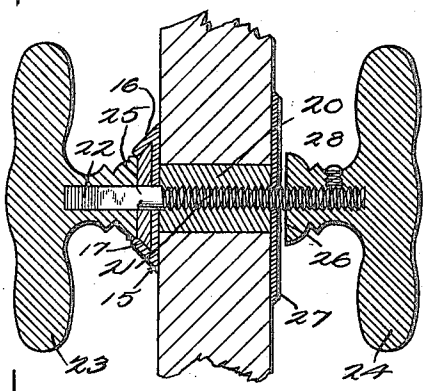


Fig. 3

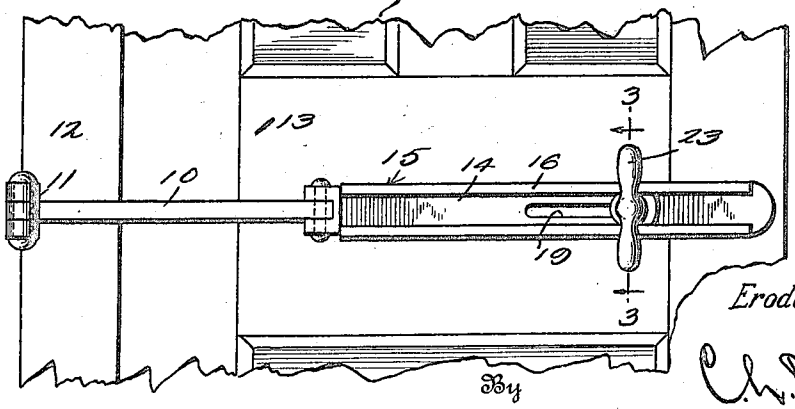


Fig. 2

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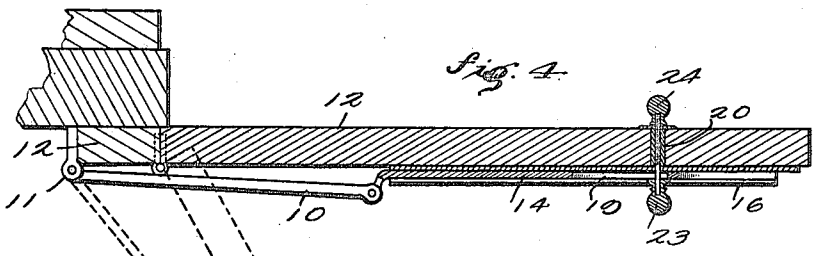
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3 SHEETS—SHEET 2.

Fig. 4.



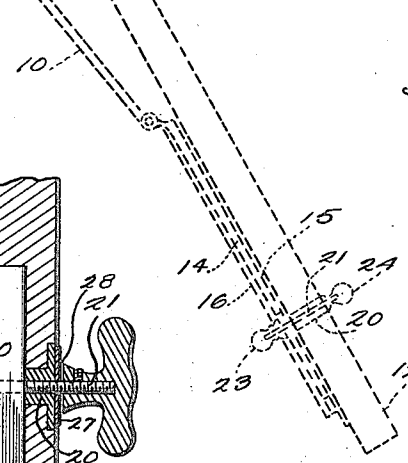


Fig. 10.

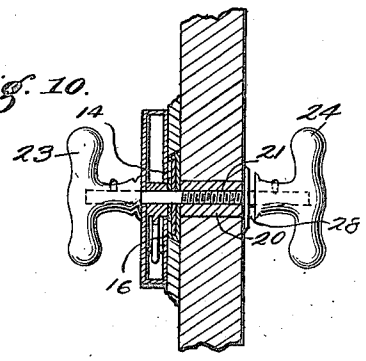
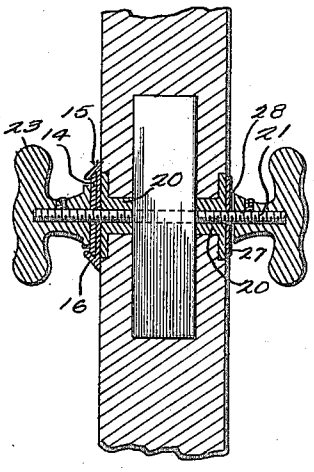
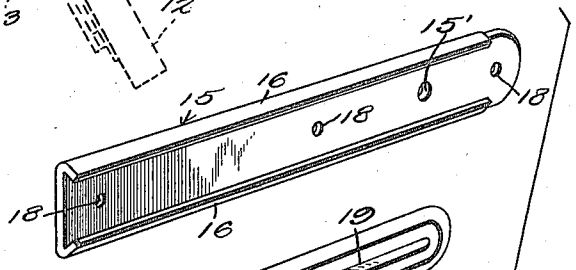


Fig. 9.





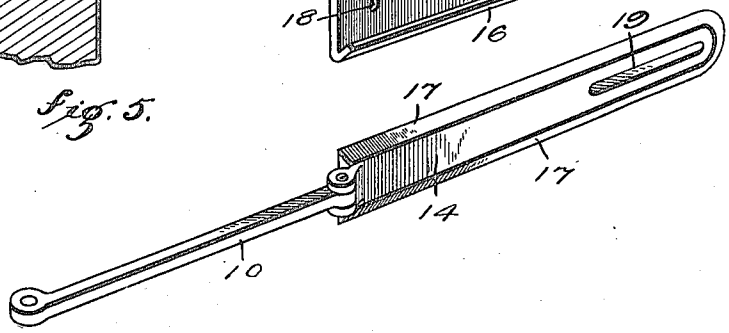


Fig. 5.

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DOOR AND WINDOW ADJUSTER.

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3 SHEETS—SHEET 3.

Fig. 6.

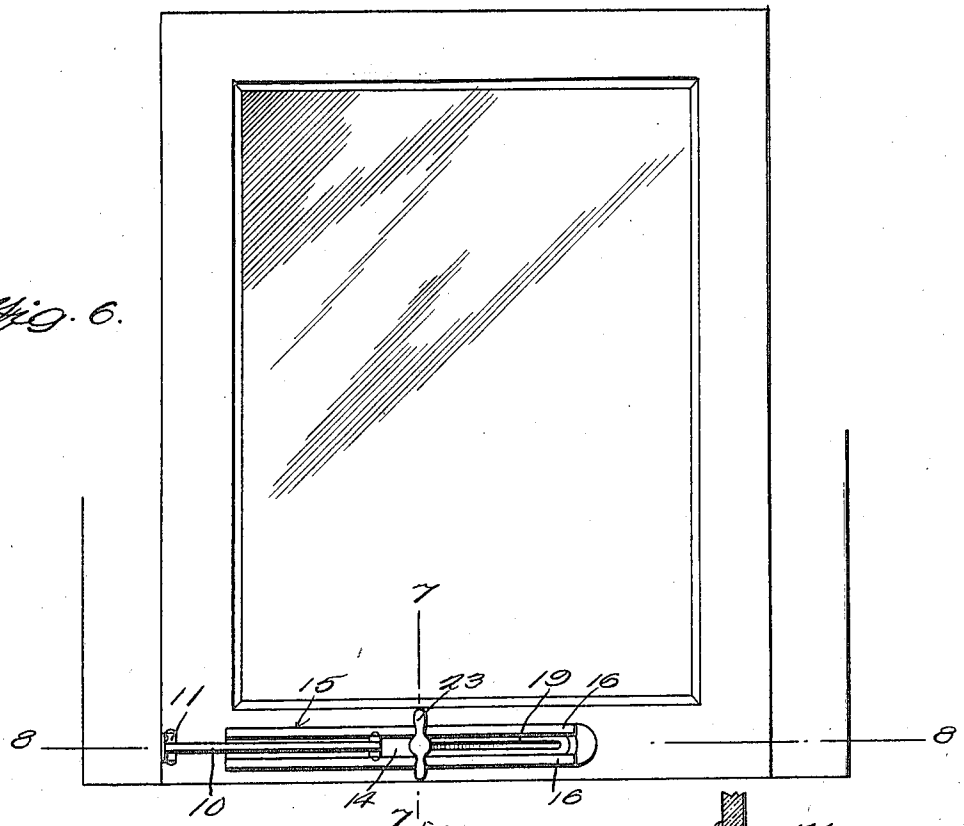


Fig. 7.

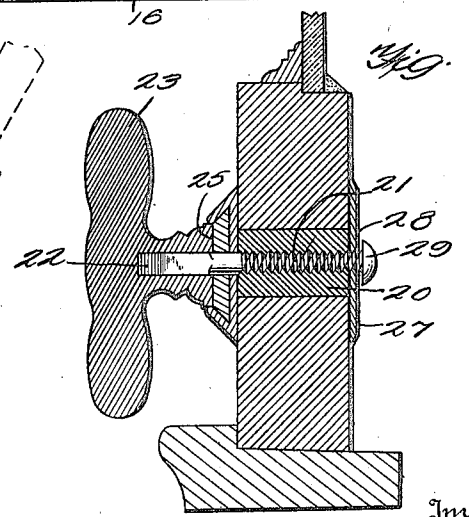


Fig. 8.

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UNITED STATES PATENT OFFICE.

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DOOR AND WINDOW ADJUSTER.

1,386,740. Specification of Letters Patent. Patented Aug. 9, 1921.

Application filed June 4, 1920. Serial No. 386,534.

To all whom it may concern:

Be it known that I, ERODE R. SUBROYAR, a subject of the King of Great Britain, residing at Shanti Bhavan, Brodies Road, Mylapore, Madras, India, have invented certain new and useful Improvements in Door and Window Adjusters, of which the following is a specification.

This invention relates to improvements in door and window adjusters.

An important object of the invention is to provide a device by means of which a door or window may be secured in any desired position.

A further object is to provide a device of the above character which is readily combinable with door locks of the usual type.

Other objects and advantages of the invention will become apparent throughout the course of the following description.

In the accompanying drawings, wherein for the purpose of illustration are shown preferred embodiments of my invention and wherein like numerals designate like parts throughout,

Figure 1 is a side elevation of a door having my invention applied thereto,

Fig. 2 is an enlarged fragmental side elevation thereof,

Fig. 3 is an enlarged section taken on the line 3—3 of Fig. 2,

Fig. 4 is a section taken on the line 4—4 of Fig. 1,

Fig. 5 is a combined perspective of the parts of my invention separated,

Fig. 6 is a side elevation of my device attached to a window which opens outwardly,

Fig. 7 is a section taken on the line 7—7 of Fig. 6,

Fig. 8 is a section taken on the line 8—8 of Fig. 6, showing the open position of the window in dotted lines,

Fig. 9 is a sectional view showing my device combined with a mortise lock, and,

Fig. 10 is a sectional view showing my device combined with a rim lock.

Referring now more particularly to the drawings, the numeral 10 indicates a rod, pivotally connected at one end to a bracket 11 secured to the frame 12 of the door. It will be understood that where the invention is applied to a window, the bracket 11 will be secured to the wall adjacent the window or door to which the invention is applied instead of the framing.

The free end of the rod 10 is pivotally connected to a slidable bar 14, which bar operates in a suitable guide 15 secured to the door or window. This guide may be of any desired construction, that in the present instance being shown as a bar with longitudinal portions 16 at its edges, which overlap the respective edges 17 of the slidable bar 14, the guide 15 being provided with openings 18 for the reception of the means whereby it is secured to its support.

The slidable bar 14 is provided adjacent its outer end with a longitudinal slot 19. A screw nut 20 is secured in the material of the door or window transversely thereof in any desired manner. A screw-threaded spindle 21 engages the threads of the nut 20, and is provided upon one end with a square shank 22, to which is secured an operating handle 23. The opposite end of the spindle 21 extends through the door or window and is provided with an operating handle 24, secured thereto in any suitable manner. This spindle extends through an opening 15′ formed in the guide 15 and through the slot 19, of the slidable bar 14.

The collar or base 25 of the inside handle 23, will, when the door is fastened, bear upon the bar 14, and the collar or base 26 of the outside handle 24 will be slightly spaced from the door. The length of the spindle between the handles is such that when the collar or base of one handle is bearing against the surface opposed thereto, there is, on the opposite side of the door, a small gap between the collar or base of the other handle and the surface opposed thereto. If desired, a plate 27 may be secured to the door intermediate the outer handle 24 to the door or a flange may be formed upon the nut 20 against which the collar or base 26 of the handle may bear. When the spindle is partially rotated by one of its handles, it will move longitudinally in one of the screw nuts according to its direction of partial rotation.

In the form shown in Figs. 6, 7, and 8, the door or window opens outwardly. In connection with this construction, I prefer to employ a curved bar 10 which will allow a further opening of the window than is possible with a straight bar. Furthermore, in this construction, the handle 23 will, when the window or door is in the closed position, be arranged in the end of the slot nearest the pivotal connection of the bar 10 and the slidable bar 14, whereas in the forms

shown in Figs. 1 to 4, the reverse of the above arrangement is true.

Where the window opens in only one direction, it is unnecessary to provide a handle upon the outside thereof, and this handle may be substituted, as shown in Fig. 7, by an enlargement 29 formed upon or secured to the spindle 21. If desired, the spindle may be of such length that it only extends partially through the nut 20 in this form of my device.

The operation of my device is as follows: When the door is fastened in its closed position, the collar or base 25 of the inside handle 23, presses against the slidable bar 14 and prevents the door 13 from being moved. When the handle 23 is turned, the spindle 21 moves longitudinally of its own axis in the nut 20, and the pressure on the slidable bar is released. The collar or base 26 of the outside handle 24 then bears against the door 13 or the intervening plate 27 and the slidable bar 14 can move backward and forward with respect to its guide 15 and allow the door to be opened and closed to the desired extent until it is secured in its adjusted position by reverse rotation of one of the handles. It will be understood that if the outside handle be fixed to the spindle so that when turned it will rotate the spindle, the same effect can be obtained by rotating either of the handles.

It will be obvious to those familiar with the art that my adjuster may be readily combined with the ordinary rim lock by simply utilizing a slightly longer square shank 22 which will extend through the square opening generally formed for the reception of the knob shaft in this type of lock, as shown in Fig. 10. It will furthermore be obvious that but very slight changes are necessary in the construction herein shown to enable its combination with the usual mortise lock, this being effected by screw-threading the ends of the spindle 21 and forming the central portion thereof with a square shank which will enter the squared opening provided in the lock for the knob shaft, as shown in Fig. 9. The threaded ends of the spindle 21 will be mounted in nuts 20 arranged upon opposite sides of the mortise lock.

It is to be understood that the form of my invention herewith shown and described are to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. In an adjuster for doors and the like, a rod pivotally secured to the framing thereof, a guide secured to the door and provided with an opening, a slotted bar slidably mounted in said guide and pivotally connected with the free end of the rod, a rotatable spindle having a portion extending through the slot in said bar and the opening in said guide and having threaded engagement with said door, and a handle secured to said spindle and provided with a base of greater width than said slot.

2. In an adjuster for doors and the like, a rod pivotally secured to the framing thereof, a guide secured to the door and provided with an opening, a slotted bar slidably mounted in said guide and pivotally connected with the free end of said rod, a rotatable spindle having a portion extending through the slot in said bar and the opening in said guide and having threaded engagement with said door, a lock associated with the said door and provided with the usual polygonal knob shaft receiving opening, and a squared portion on said spindle extending through said knob shaft receiving opening.

3. In an adjuster for doors and the like, a rod pivotally secured to the framing thereof, a guide secured to the door and provided with an opening, a slotted bar slidably mounted in said guide and pivotally connected with the free end of said rod, a rotatable spindle having a portion extending through the slot in said bar and the opening in said guide and having threaded engagement with said door, and a handle secured to each end of said spindle, said handles having broad bases and being spaced apart upon said spindle a distance slightly greater than the distance from the outer face of said bar to the opposite side of the door.

4. In an adjuster for doors and the like, a rod pivotally secured to the frame thereof, a guide secured to the door and provided with an opening, a slotted bar slidably mounted in said guide and pivotally connected with the free end of said rod, a member having an internally threaded bore mounted in the door and having its bore alined with the opening in said guide, a rotatable spindle having a portion extending through the slot in said bar and the opening in said guide and having threaded engagement with the internally threaded member mounted in the door, and a handle secured to said spindle and having a base of greater width than said slot.

In testimony whereof I affix my signature in presence of two witnesses.

ERODE R. SUBROYAR.

Witnesses:
C. SRINIVASAN,
ESKUSHMA SWAMI.