Sept. 5, 1939. G. B. KURTZON 2,172,208

ADJUSTABLE LOCKING DEVICE

Filed July 18, 1938

Fig. 1.

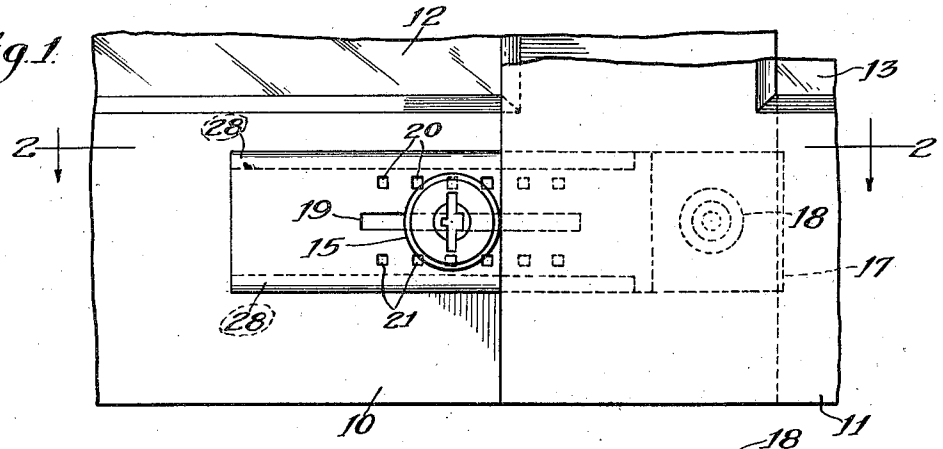


Fig. 2.

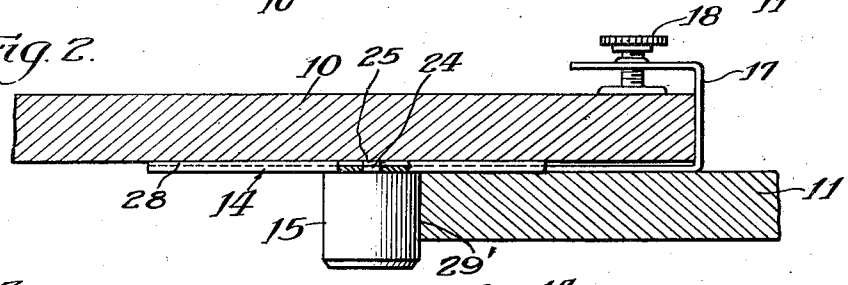


Fig. 3.

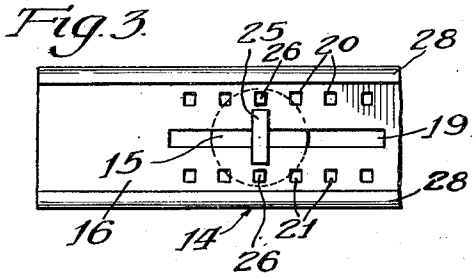


Fig. 4.

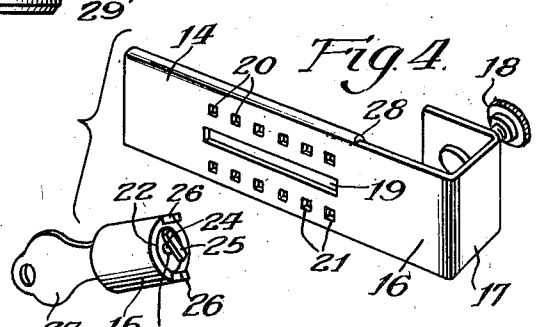


Fig. 5.

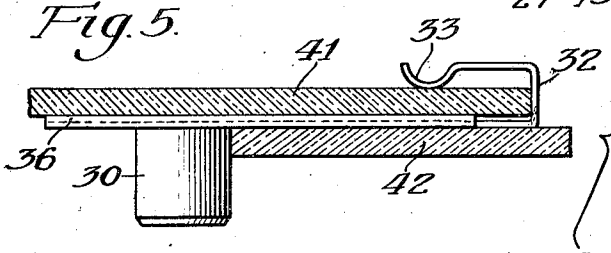


Fig. 6.

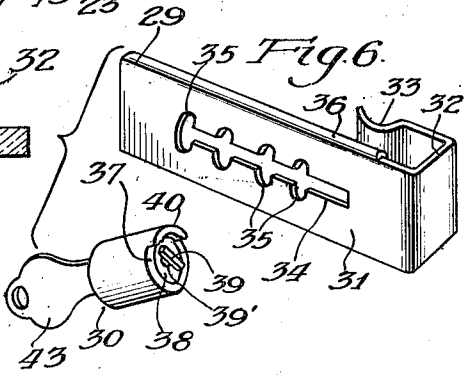
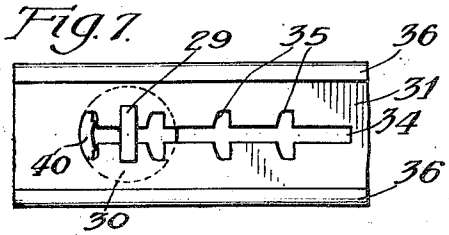


Fig. 7.



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UNITED STATES PATENT OFFICE

2,172,208

ADJUSTABLE LOCKING DEVICE

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Application July 18, 1938, Serial No. 219,703

6 Claims. (Cl. 70—14)

This invention relates to door locks and more particularly to adjustable locking devices capable of being removably attached to sliding doors, hinged doors, drawers and the like.

The locking devices made in accordance with the present invention are, for example, particularly adapted for use to lock sliding doors of the kind ordinarily used in show cases, garment racks and like devices for the display of merchandise. Such locking devices comprise a bent or hook-shaped plate called a keeper which is adapted to be removably secured to one end of the inner or inside door and a lock adapted to be removably secured to the keeper and to coact with one end of the outer door to prevent sliding or opening of the doors. Means are provided on the keeper to permit the lock to be secured thereto at any suitable place and thereby provide a novel arrangement for accommodating doors of varying size.

The locking devices embodying the present invention are simple in design and construction and relatively inexpensive to manufacture.

The invention possesses many other advantages which will be readily apparent from a consideration of the embodiments thereof shown in the drawing. These embodiments will be described in detail to illustrate the invention; but it is to be understood that the invention is not limited to the details shown and described, except as set forth in the appended claims.

The invention is illustrated in the accompanying drawing wherein:

Figure 1 is a fragmentary front elevation of sliding doors in closed position with the locking device of my invention in operative position to prevent relative sliding movement between the doors;

Fig. 2 is a transverse sectional view thereof taken along the line 2—2 of Fig. 1;

Fig. 3 is a fragmentary view of the back of the locking device of Fig. 1 showing the means for locking the lock to the keeper in locked position;

Fig. 4 is a perspective view of the keeper and lock of the locking device of Fig. 1;

Fig. 5 is a sectional view similar to Fig. 2 of a modified form of my invention;

Fig. 6 is a perspective view of the keeper and lock the modification of Fig. 5; and

Fig. 7 is a view similar to Fig. 3 showing the operative locked position of the modification of Fig. 5.

In the drawing, referring particularly to Figs. 1 and 2, there is shown a pair of sliding doors 10 and 11 which are designed for use in show cases, garment racks and like devices for the display of merchandise. The door 10 is the inner door and the door 11, the outer door. As shown, the doors are in closed position and each of them is formed of a wooden frame having central glass plates 12, 13 through which the merchandise may be viewed. The locking device shown in Fig. 4 is secured in operative position to the inner door 10 to prevent relative sliding movement of the doors and consequent opening thereof as clearly shown in Figs. 1 and 2.

The locking device comprises a keeper 14 and lock 15. Keeper 14 may be a flat plate screwed to the door, although as shown it is in the form of a bent plate or hook having an elongated plate portion 16 of metal or other suitable material, suitably formed with a substantially U-shaped or hooked portion 17 at one end thereof. A thumb screw 18 is provided in the short leg of the hook to removably attach the keeper to the door in a manner to be described. Plate portion 16 is provided with an elongated longitudinal slot 19 substantially centrally thereof and spaced openings 20 and 21 arranged in two parallel rows, one above and one below slot 19 for a purpose to be hereinafter described. As shown, the openings 20 and 21 are square although they may have any other suitable configuration, and are so formed that the openings 21 directly underlie the openings 20.

The lock 15 comprises a barrel 22 having a conventional tumbler 23 rotatably positioned therein. Tumbler 23 is provided at one end with a stud or post 24 having an elongated lug 25 positioned transversely to the axis of rotation of the tumbler. The lug 25 is of a shape and size capable of passing into and through elongated slot 19. A key 27 is shown as extending into the other end of tumbler 23. Barrel 22 is provided with diametrically opposed lugs or pins 26 of a size and shape adapted for entry into an opposed pair of the openings 20 and 21.

In utilizing the locking device for locking a pair of sliding doors, as for example, the doors 10 and 11, the keeper 14 is first secured to one end of inner door 10 as clearly shown in Figs. 1 and 2. It will be apparent from an inspection of these figures that the hooked end 17 of keeper 14 presses around the frame at one end of door 10 so that the short leg of the hook is parallel to the rear face of the door frame and the long leg or face plate 16 is parallel to the front face thereof. Thumb screw 18 is then tightened to firmly secure the keeper to the door frame. To permit rotation of the lug 25 when it is inserted through

slot 19 to effect locking position a space is provided between face plate 16 and the front face of the door frame as by the parallel beads 28 formed by the inturned longitudinal edges or extensions of the face plate.

To lock the doors, they are first closed as shown in Fig. 1, and key 27 is turned to revolve the tumbler 23 until the lug 25 forms a right angle with a line drawn through opposed extensions 26. The lock is then secured to keeper 14 by inserting lug 25 in and through slot 19 and extensions 26 in an opposed pair of openings 20 and 21. It will be apparent that the extensions 26 are inserted in a pair of opposed openings closely adjacent to the end 29' of outer door 11 so that the side of barrel 22 of lock 15 abuts the end of the door as clearly shown in Fig. 2. The key 27 is now turned to rotate tumbler 23 until the lug 25 is at an angle to elongated slot 19 in which position the lock is secured to keeper 14 and the doors are incapable of relative sliding movement to open them. This locked position is clearly shown in Fig. 3. The key may now be removed. To unlock the doors and permit relatively sliding movement between them, the key is inserted in the tumbler and the latter turned to permit the removal of the lug through elongated slot 19 and consequent removal of the lock.

In Figs. 5 to 7 a modified form of locking device is shown which is particularly adapted for use on sliding glass doors. This form of locking device, as is shown in Fig. 6, comprises a keeper 29 formed of a resilient metal such as brass or the like and a lock 30. The keeper is formed with a face plate 31 and a bent or hooked end 32 is adapted to be positioned about an end of the inner glass door. The short leg of the bent end is provided with an inwardly curved resilient or spring-like end portion 33 which, in conjunction with the face plate, forms a spring clip or retaining and gripping means by which the keeper may be removably attached to the glass door. Keeper 29 is provided with an elongated slot 34 and a plurality of arcuate slots 35 which intersect slot 34. Spacer beads 36 are provided along the parallel edges of face plate 31 which are formed in a manner similar to beads 28 and used for a similar purpose.

Lock 30 comprises a barrel 37 and a tumbler 38 rotatably mounted therein. The tumbler is provided with an integral extending post 39' and lug 39 similar in construction to post 24 and lug 25 hereinbefore described. Barrel 37 is provided with an arcuate-shaped extension or lug 40 which is adapted to be inserted in a slot 35.

The assembly of this locking device on the door will be apparent from the foregoing. The spring clip end of keeper 29 is positioned about the end of the inner glass door 41 with the face plate 31 parallel to and spaced from the front face of the door in a manner clearly shown in Fig. 5. The doors 41 and 42 are now closed and key 43 is turned in the lock until lug 39 is positioned along a line which substantially intersects the center of curved lug 40. Lugs 39 and 40 are now inserted in slot 34 and a slot 35 respectively and the key is turned to secure the lock to the keeper to lock the doors as hereinabove described and as clearly shown in Figs. 5 and 7. The lock may be removed by reversing the operations.

While in the description of the embodiments of my invention I have made reference to certain details of construction and design, it is, of course, obvious that my invention is not to be construed as limited thereto since the details may be altered without departing from the scope of my invention. It is to be understood that the locking devices of my invention are of general applicability and may be used in connection with hinged doors, sliding drawers and the like.

I claim:

1. A locking device adapted for use in combination with an inner and outer sliding door to lock the same comprising a keeper adapted to be secured to one end of the inner door and having a face plate adapted to extend substantially parallel to the front face of said door, said plate having an elongated slot, and a lock adapted to be removably secured to said keeper to prevent relative sliding movement between said doors comprising a barrel and a tumbler rotatably mounted therein, an outwardly extending post on the inner end of said tumbler having a lug integrally formed thereon, said lug being adapted to pass into and through the elongated slot in said keeper whereby on turning the tumbler the lock may be secured to the keeper.

2. A locking device adapted for use in combination with an inner and outer sliding door to lock the same comprising a keeper adapted to be secured to one end of the inner door and having a face plate adapted to extend substantially parallel to the front face of said door, said plate having an elongated slot and an opening, and a lock adapted to be removably secured to said keeper to prevent relatively sliding movement between said doors comprising a barrel and a tumbler rotatably mounted therein, an outwardly extending post on the inner end of said tumbler having a lug integrally formed thereon, said barrel having an outwardly extending pin adapted to extend into said opening, said lug being adapted to pass into and through the elongated slot in said keeper whereby on turning the tumbler the lock may be secured to the keeper.

3. A locking device adapted for use in combination with an inner and outer sliding door to lock the same comprising a keeper adapted to be secured to one end of the inner door and having a face plate adapted to extend substantially parallel to the front face of said door and spaced therefrom, said plate having an elongated slot and a plurality of pairs of openings, each of said pair of openings being arranged so that a line drawn through them will intersect the elongated slot, and a lock adapted to be removably secured to said keeper to prevent relative sliding movement between said doors comprising a barrel and a tumbler rotatably mounted therein, an outwardly extending post on the inner end of said tumbler having a lug integrally formed thereon, said barrel having a pair of outwardly extending pins adapted to extend into a pair of openings, said lug being adapted to pass into and through the elongated slot in said keeper whereby on turning the tumbler the lock may be secured to the keeper.

4. A locking device adapted for use in combination with an inner and outer sliding door to lock the same comprising a keeper adapted to be secured to one end of the inner door and having a face plate adapted to extend substantially parallel to the front face of said door and spaced therefrom, said plate having an elongated slot and a plurality of arcuate slots intersecting said elongated slot, and a lock adapted to be removably secured to said keeper to prevent relative sliding movement between said doors comprising a barrel and a tumbler rotatably mounted therein, an outwardly extending post on the in-

ner end of the tumbler having a lug integrally formed thereon, said barrel having an arcuate-shaped extension adapted to extend into one of said arcuate slots, said lug being adapted to pass into and through the elongated slot in said keeper whereby on turning the tumbler the lock may be secured to the keeper.

5. A locking device adapted for use in combination with a pair of relatively sliding members to lock the same comprising a keeper adapted to be secured to one of said members, said keeper having a face plate adapted to extend substantially parallel to a face of said member, said plate having an elongated slot and a plurality of openings, and a lock adapted to be removably secured to said keeper to prevent relative sliding movement between said members comprising a barrel and a tumbler rotatably mounted therein, an outwardly extending post on the inner end of said tumbler having a lug at the end thereof, said barrel having an extension at one end thereof adapted to extend into one of said openings, said lug being adapted to pass into and through said elongated slot whereby on turning the tumbler the lock may be secured to the keeper.

6. A locking device adapted for use in combination with a pair of relatively sliding members to lock the same comprising a keeper adapted to be secured to one of said members, said keeper having a face plate adapted to extend substantially parallel to a face of said member, said plate having an elongated slot and a plurality of slots intersecting said elongated slot, and a lock adapted to be removably secured to said keeper to prevent relative sliding movement between said members comprising a barrel and a tumbler rotatably mounted therein, an outwardly extending post on the inner end of said tumbler having a lug at the end thereof, said barrel having an extension at one end thereof adapted to extend into one of said intersecting slots, said lug being adapted to pass into and through said elongated slot whereby on turning the tumbler the lock may be secured to the keeper.

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