May 3, 1955 L. H. FISLER 2,707,385

ADJUSTABLE LOCK

Filed May 27, 1952

2 Sheets-Sheet 1

Fig. 1.

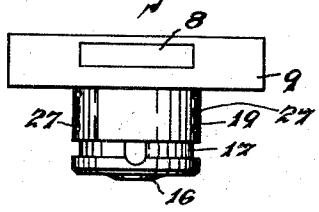


Fig. 2.

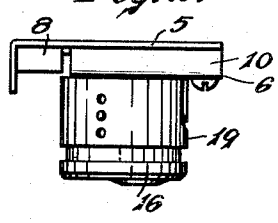


Fig. 11.

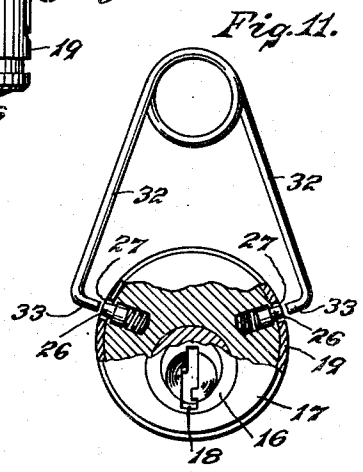


Fig. 3.

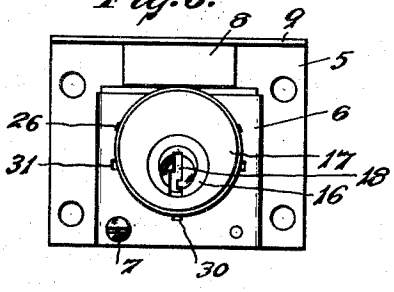


Fig. 5.

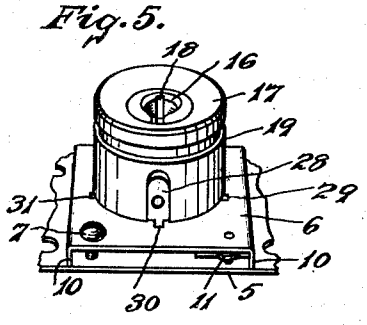


Fig. 4.

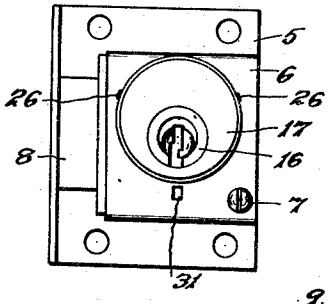


Fig. 7.

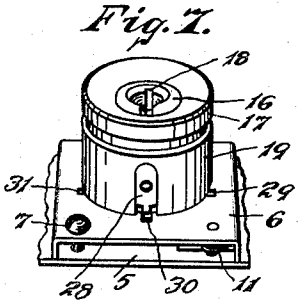
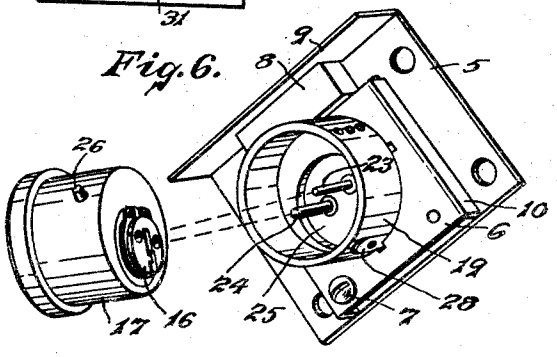


Fig. 6.



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Fig. 8.

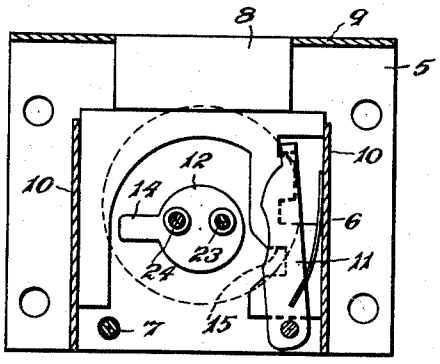


Fig. 9.

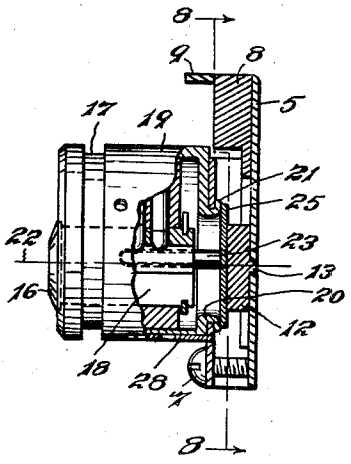
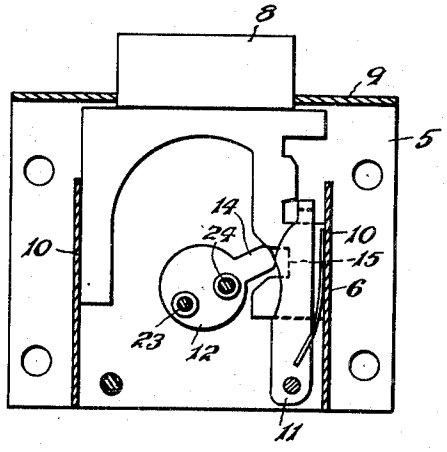


Fig. 10.



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2,707,385

ADJUSTABLE LOCK

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Application May 27, 1952, Serial No. 290,180

7 Claims. (Cl. 70—134)

This invention relates to an adjustable lock and more particularly to a lock which is especially designed for use in cabinets, drawers and the like.

An object of this invention is to provide a lock which may be adjusted to conform with the particular thickness of the member in which the lock is to be installed.

A further object of the invention is to provide such a lock which can also be adjusted to locate the lock cylinder so that the key plug thereof will always be disposed to receive the key in the same position regardless of whether the lock is mounted so as to project the locking bolt in a left or right hand direction, as when mounted in left or right hand doors, or in a vertical direction, as when mounted in a drawer.

Further objects and advantages of this invention will be more clearly understood from the following description and the accompanying drawings in which:

Figs. 1, 2 and 3 are plan, side and front views, respectively, showing the lock with its cylinder adjusted for use in a conventional drawer.

Fig. 4 is a front view of said lock showing it adjusted for use in a position wherein the bolt is projected towards the left.

Fig. 5 is a fragmentary view showing the cylinder retaining latch.

Fig. 6 is an exploded perspective view showing the cylinder removed from the lock.

Fig. 7 is a view similar to Fig. 5, but showing the retaining latch in unlatched position.

Fig. 8 is a sectional front view of the lock on line 8—8 of Fig. 9.

Fig. 9 is a side view of the said lock partly in central vertical section.

Fig. 10 is a view similar to Fig. 8, but showing the lock mechanism in locking position.

Fig. 11 is a front view partly in section and showing a suitable tool for retracting the cylinder securing studs.

My improved lock comprises a casing which includes a back plate 5, on which the bolt operating mechanism is mounted, and a cover 6 that is secured to said plate in a conventional manner and preferably retained thereon by means of a suitable screw 7. A bolt 8 is slidable through an opening in a wall 9 which extends perpendicularly from the back plate 5. The said bolt has a rearward extension which is slidable between the side walls 10—10 of the cover 6 and there is provided a suitable tumbler 11 to engage notches in the said rearward extension for retaining the bolt in its locked and unlocked positions.

A bolt operating cam 12 is rotatably mounted upon the back plate 5 by means of an axial stud 13 which projects from the said cam into an opening in the back plate. A finger 14 extends from said cam and is engageable with the sides of a notch 15 in the rearward extension of the bolt for moving said bolt into its locked and unlocked positions in a manner well-known by those skilled in the art. The said bolt operating cam 12 is actuated by means of a

key-operated plug 16 which is rotatable in a suitable lock cylinder 17 that is mounted upon the said casing.

This invention is particularly directed to the provision of suitable means for adjusting the said cylinder to different positions relatively to the casing so that the key slot 18 in the key plug may always be disposed vertically to receive the key with its tumbler notches at the top regardless of the direction in which the bolt is projected in any particular installation of the lock. My invention, therefore, provides a cup 19 which slidably receives therein the lock cylinder 17 which, as shown, is preferably of a conventional pin tumbler type wherein the key plug 16 is located eccentrically with respect to the said cylinder. The said cup 19 is rotatably secured to the cover 6 by means of a collar 20 which projects through an opening in the cover 6 and is flared outwardly to provide an annular flange 21 for securing the cup 19 to the said cover. The collar 20 is eccentric relatively to the cover 6 and is located upon the axis 22 of the plug 16, which axis is also the axis of the cam 12. Therefore, the position of the plug 16 with relation to the cam 12 always remains the same regardless of the position to which the cup 19 is adjusted relatively to the bolt.

The said cam 12 has secured thereto a pair of posts 23 and 24 which extend perpendicularly therefrom and are received in corresponding openings in the key plug 16 for slidably connecting the cam to the key plug. One of said posts is preferably of a larger diameter than the other and the openings in the plug are of corresponding diameters to prevent the plug from being connected in the wrong position with relation to said operating cam 12 and also with relation to the cylinder 17. A washer 25 is provided upon the operating cam 12 and abuts the end of the collar 20 to retain the said cam in its operating position upon the back plate 5 and with the stud 13 of the cam within the hole in the back plate.

The cylinder 17 is longitudinally slidable within the cup 19 and is retained in different positions therein by means of spring-pressed retaining pins 26—26 which project from opposite sides of the cylinder 17 and are urged outwardly by suitable springs into oppositely disposed holes 27—27 which are located in rows of longitudinally spaced holes in the wall of the cup 19.

The cup 19 is provided with a slidable latch member 28 which has a prong that fits into positioning recesses 29, 30 and 31 in the cover 6 so as to retain the said cup in any one of three different positions about the axis of the key plug 16.

When my improved lock is being installed, the latch member 28 is first raised and the cup 19 is rotated in order to position the lock cylinder so that the key slot in the key plug thereof will be disposed vertically to permit the key to be inserted with the tumbler notches at the top of the key. The latch member 28 is then forced downwardly into its respective positioning recess in the cover 6.

My improved lock may also be adjusted for adapting it to doors or drawer fronts of different thicknesses by simply forcing the pins 26—26 inwardly, to disengage them from the holes in the cup 19, and then sliding the cylinder 17 in the cup to the position which will correspond to the thickness of the member in which the lock is to be installed, so that the front of the cylinder will be properly located adjacent to the front surface of the said member, and permitting the pins 26—26 to engage with the proper pair of the holes 27—27 so as to secure the cylinder to the cup.

As shown in Fig. 11, a suitable tool may be provided for urging the retaining pins 26—26 out of the holes in the cup 19 to permit the adjustment of the lock cylinder. This tool preferably comprises a pair of prongs 32—32 with fingers 33—33 which are adapted to enter the holes in the cup and force the said pins inwardly.

It will be understood from the above description that my invention provides a lock which may be adjusted to locate the key plug thereof in a desired position regardless of the position in which the lock is installed and also may be adapted to the thickness of the member in which the lock is to be installed.

I claim:

1. A lock comprising a casing, a bolt movable in said casing, a lock cylinder, an operating member rotatably mounted in said casing for operating said bolt, a key-operated plug rotatable in said cylinder for actuating said operating member, and means for adjustably locating the said cylinder and plug in different positions relatively to the bolt; the said means including a cup-shaped member rotatable about the axis of the rotation of said operating member and the said cylinder being longitudinally slidable within said cup-shaped member, and means for adjustably locating the said cylinder in different longitudinal positions in the cup-shaped member with the axis of the key plug upon the axis of the said operating member.

2. A lock comprising a casing including a back plate and a cover, a bolt slidable on said back plate and within said cover, an operating cam member rotatable in said casing on an axis perpendicular to the back plate for operating said bolt, a cup-shaped member mounted upon said cover and rotatable about the said axis of the said operating member, a lock cylinder having a key-operated plug therein and longitudinally slidable within said cup-shaped member, means for adjustably securing the cylinder to the cup-shaped member with the said plug located on the axis of the operating member, and a slidable connection between the said plug and operating cam member.

3. A lock comprising a casing including a back plate and a cover, a bolt slidable in said casing, a bolt operating cam member rotatable in said casing about an axis perpendicular to the back plate, a cup-shaped member mounted upon said casing and rotatable about the axis of said operating cam member, a lock cylinder slidable in said cup-shaped member, a key-operated plug rotatable in said cylinder, releasable means for securing the said cylinder to the cup-shaped member in different longitudinal positions therein and with the axis of the plug upon the axis of the operating cam member, a pair of posts extending perpendicularly from said operating cam member and slidably connected to the said plug, and means for securing the said cup-shaped member to the casing in different positions about the said axis of the operating cam member.

4. A lock comprising a casing including a back plate and a cover, a bolt slidable in said casing, an operating member pivoted upon the said back plate on an axis perpendicular thereto for operating the bolt; the said cover having an opening therein upon the axis of said operating member, a cup-shaped member mounted upon said

cover and having a projection extending into said opening to provide for rotation of the said cup-shaped member for angular adjustment thereof about the said axis, a retaining latch member for securing said cup-shaped member in different adjusted positions upon the casing, a lock cylinder, a key-operated plug rotatable in said cylinder, releasable means adjustably securing said cylinder within said cup-shaped member in different longitudinal positions relatively thereto and locating the said plug upon the said axis of the operating member, and a slidable connection between said plug and operating member.

5. A lock comprising a casing having a back plate, a bolt slidable in said casing, an operating member rotatable about an axis perpendicular to said back plate for operating said bolt, a cup-shaped member rotatable on said casing about the said axis of the operating member and disposed eccentrically with relation to said axis, a lock cylinder slidable within said cup-shaped member, a key-operated plug rotatable in said cylinder and disposed eccentrically therein, releasable means for adjustably securing said cylinder to said cup-shaped member with the axis of said plug disposed upon the axis of the operating member, and a slidable connection between the plug and operating member.

6. A lock comprising a casing, a bolt movable in said casing, a lock unit including a cylinder and a key-operated plug in said cylinder, means for locating the cylinder about the rotatable axis of said plug in different angular positions relatively to the bolt, and separate means for adjustably locating the cylinder in different positions longitudinally of said axis.

7. A lock comprising a casing, a bolt, a lock unit including a cylinder and a key-operated member eccentrically located in said cylinder and rotatable therein, means connected to said key-operated member for operating said bolt, and means for adjustably locating said lock unit in different positions on said casing about the rotatable axis of said key-operated member.

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