

July 1, 1941.

R. A. SPEER

2,247,621

LOCK MECHANISM

Filed July 30, 1940

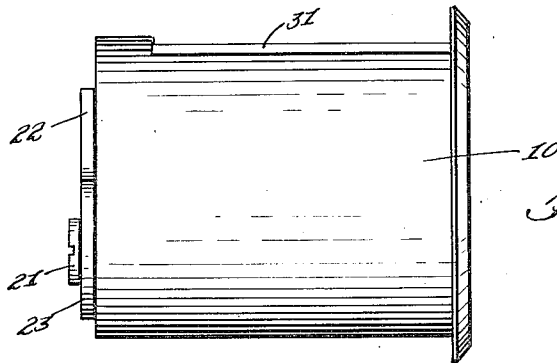


Fig. 1.

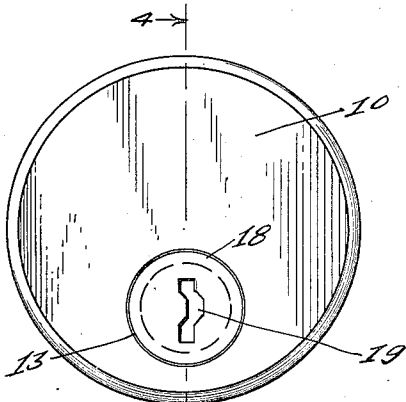


Fig. 2.

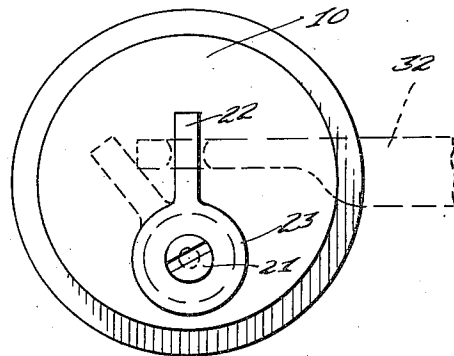


Fig. 3.

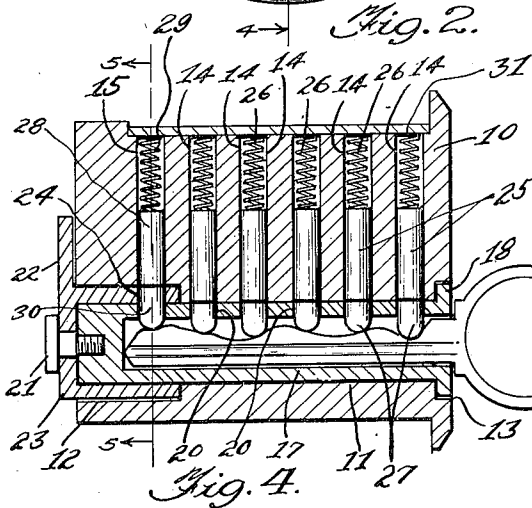


Fig. 4.

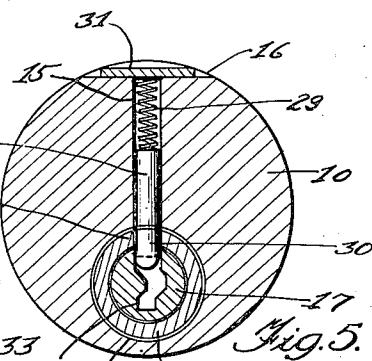


Fig. 5.

Inventor

Robert A. Speer

By *Clarence A. O'Brien*

Attorney

UNITED STATES PATENT OFFICE

2,247,621

LOCK MECHANISM

Robert A. Speer, Detroit, Mich.

Application July 30, 1940, Serial No. 348,510

5 Claims. (Cl. 70-364)

The present invention relates to new and useful improvements in lock mechanisms.

The primary object of the invention is to provide a lock mechanism which will be pick-proof.

Other objects of the invention are to provide a lock mechanism which will be comparatively simple in construction, durable and reliable in use, and which may be manufactured at low cost.

Still other objects and advantages of the invention will become apparent from a study of the following detailed description taken in connection with the accompanying drawing wherein like characters of reference designate corresponding parts throughout the several views, wherein:

Figure 1 is a side elevational view of my invention.

Figure 2 is a front elevational view of the invention.

Figure 3 is a rear elevational view of the invention.

Figure 4 is a longitudinal vertical sectional view taken substantially on the line 4-4 of Fig. 2.

Figure 5 is a transverse sectional view taken substantially on the line 5-5 of Fig. 4.

Referring now to the drawing, in detail, it will be seen that the reference numeral 10 designates a barrel, constructed of suitable material, and provided with a bore 11 which terminates in a counterbore 12 at its back end and a counterbore 13 at its face or front end. Vertical bores 14 are formed in the barrel 10 and communicate with the bore 11 while a bore 15 extends vertically in the barrel 10 and communicates with the counterbore 12. The top portion 16 of the barrel 11 is flat intermediate its end portions as shown in Figs. 4 and 5 of the drawing.

A rotatable key guide 17 is mounted in the bore 11. This rotatable key guide 17 is flanged as at 18 which flange is seated in the counterbore 13 when the key guide 17 is in position. The key guide 17 is closed at its back end portion and it also has a tortuous keyway 19 substantially throughout its length which communicates with openings 20 in its top side.

The key guide 17 is rotatably anchored in the bore 11 through the medium of a screw 21 which passes through an opening in the back of a swinging lever 22.

The lever 22 has a cup shaped end portion 23 in which is received the end of the key guide 17 with the cup shaped end portion 23 engaged in the counterbore 12. The cup shaped end portion 23 of the lever 22 also has an opening 24 formed therein for receiving a tumbler pin to lock said portion 23 to the key guide 17 to rotate

therewith on insertion and turning of a proper key.

Pins 25 in the bores 14 are pressed by springs 26 against pins 27 in the key guide 17 while a pin 28 is pressed by a spring 29 against a pin 30 which is engaged in the opening 24 of the cup shaped portion 23 of the lever 22 and one of the openings 20 of the key guide 17.

The springs 26 and 29, and pins 25 and 28 are held in position by a cover plate 31 as shown in Figs. 4 and 5 of the drawing.

The lever 22 may be engaged with a bolt 32 as shown in Fig. 3 or otherwise used to operate a locking bolt.

When the lever 22 is operated to move the bolt 32 the key 33 is inserted in the key guide 17 at which time the pins 27 are elevated and caused to force the pins 25 to be disengaged from the openings 20 while the pin 30 is caused to force the pin 28 from the opening in the cup shaped portion 23 of the lever 22 at which time the lever 22 may be swung by turning the key 33.

Although I have shown and described herein a preferred embodiment of my invention it is to be definitely understood that I do not desire to limit the application of the invention thereto, and any change or changes may be made in the structure and arrangement of the several parts, within the spirit of the invention as claimed.

What is claimed is:

1. In a device of the character described, a lock mechanism including a body member having a longitudinal bore terminating in counter bores therein and further having vertical bores therein, a flanged key guide mounted in said longitudinal bore with the flange in one of said counter bores, a cup-shaped member rotatably secured to said key guide and engaged in said other counter bore and a lever extending from said cup-shaped member.

2. In a device of the character described, a lock mechanism including a body member having a longitudinal bore and vertical bores therein, a key guide engaged in said longitudinal bore, a cup-shaped member rotatably secured to said key guide to hold the same in said longitudinal bore, key operated detent means in said vertical bores releasably engaged with said key guide, a lever extending from said cup-shaped member for movement therewith and key operated means engageable with said cup-shaped member for rotating the same with said key guide.

3. In a device of the character described, a lock mechanism including a body member, a rotatable member mounted in said body member, a

cup-shaped member rotatably mounted on said rotatable member, key operated slidable means for engaging said cup-shaped member with said rotatable member for rotation therewith and a lever extending from said cup-shaped member.

4. In a device of the character described, a lock mechanism including a body member having a longitudinal bore terminating in counter bores therein and further having vertical bores therein, a flanged key guide having openings therein mounted in said longitudinal bore with the flange in one of said counter bores, a cup-shaped member rotatably secured to said key guide and engaged in the other of said counter bores, said cup-shaped member having an opening therein, slidable means mounted in one of the openings in said key guide for engagement in the opening in said cup-shaped member to rotate the same

with the key guide, and a lever extending from said cup-shaped member.

5. In a device of the character described, a lock mechanism including a body member having a longitudinal bore terminating in counter bores therein and further having vertical bores therein, a flanged key guide having vertical bores therein mounted in said longitudinal bore with the flange in one of said counter bores, a cup-shaped member rotatably secured to said key guide and engaged in said other counter bore, said cup-shaped member having a vertical bore therein, pins in said vertical bores in said body and key guide, one of said pins in said body being engageable in the vertical bore in said cup-shaped member, and a lever extending from said cup-shaped member.

ROBERT A. SPEER.