Nov. 5, 1935. B. H. LARSSON 2,020,260

LOCK BARREL RETAINING PIN

Original Filed Nov. 13, 1933

Fig. 1.

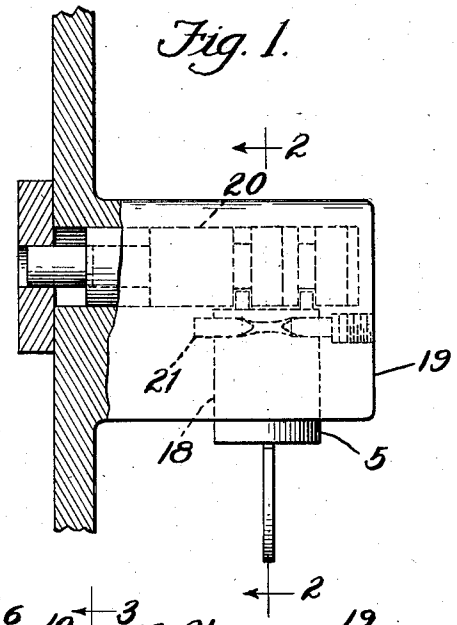


Fig. 2.

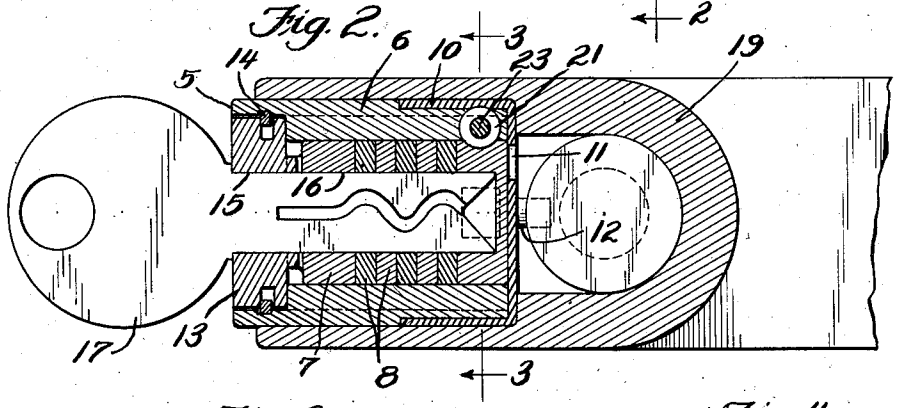


Fig. 3

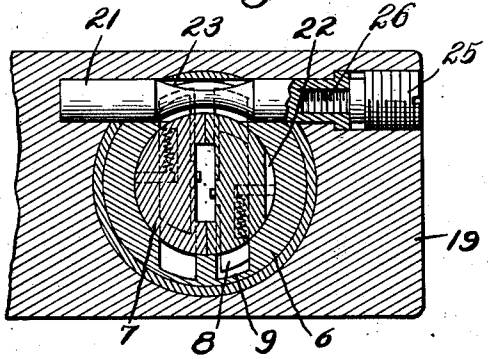
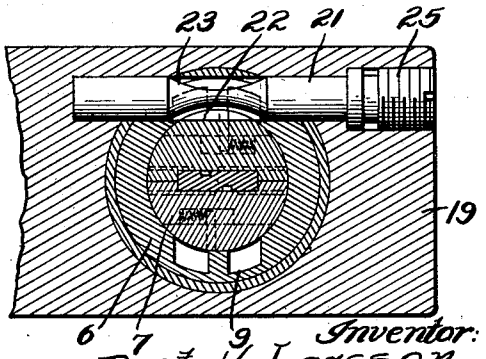


Fig. 4.



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LOCK BARREL RETAINING PIN

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Application November 13, 1933, Serial No. 697,737
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4 Claims. (Cl. 70—46)

This invention relates to improvements in cylinder locks, and more particularly to means for mounting and retaining the lock barrel in position.

In such locks the key operated mechanism is incorporated in a cylindrical barrel, the key slot opening being presented at the front end of the barrel, and an eccentric lug projects from the rear end of the barrel which connects to the lock mechanism for operating the bar or bolt. A cylindrical aperture is provided in the door, lock housing, or wherever the cylinder lock is to be installed, and the barrel is inserted from the exterior. The barrel is then fixedly secured in position by pins, screws, expanding washers, and the like which are desirably inaccessible so that the barrel can not be withdrawn to open the lock. In many installations it becomes necessary to drill holes or destroy the housing in making a repair or replacement of the lock.

In this invention means are provided for securing the barrel in position so that it can be removed by inserting a key and unlocking the lock and turning the cylinder which permits the removal of the securing means; the object being to place the barrel mounting means under the control and protection of the key.

Other objects and advantages will become more apparent in the following description, taken with reference to the accompanying drawing, in which an illustrative embodiment of this invention is shown.

Fig. 1 is a plan view of the lock installation.

Fig. 2 is a section taken on the line 2—2 of Fig. 1.

Fig. 3 and Fig. 4 are transverse sections taken on the line 3—3 of Fig. 2, with parts in changed position, Fig. 3 showing the parts locked, and Fig. 4 showing the same unlocked.

The cylinder lock unit 5 may be of any well known construction, and comprises a cylindrical tubular barrel 6 in which is rotatably mounted a tumbler cylinder 7 having key controlled laterally movable tumblers 8 which engage in longitudinal grooves 9, provided in the bore of the barrel, for maintaining the cylinder in locked position.

A pressed steel cap 10 is pressed onto the rear end of the barrel to form an abutment for the inner end of the cylinder, and the cap has a slot 11 through which a lug 12 projects, the lug being eccentrically secured to the end of the cylinder. At the front end, the barrel is closed to retain the cylinder within the barrel by a key slot disc 13, rotatably secured in position by a snap ring 14, the slot 15 in the disc forming a continuation of the slot 16 in the cylinder for the insertion of the key 17.

The unit 5 is inserted in a cylindrical recess 18 which is provided in the housing 19 which contains the bolt mechanism 20, the bolt 20 being slotted to receive the lug 12, so that the bolt may be operated by turning the cylinder.

In this invention the barrel is fixedly secured in position by means of a pin 21 which is inserted in the housing from the exterior thereof. The pin extends through one side of the barrel and intersects the side of the cylinder. The cylinder is grooved at 22 which permits the insertion or removal of the pin when the cylinder is in an unlocked position, as shown in Fig. 4; and the mid portion 23 of the pin 21 is reduced in diameter so that the cylinder can be turned when the pin is fully inserted. The outer end of the pin may be covered by a plug 25, threaded into the housing; and the end of the pin may be provided with an internally threaded hole 26 for engagement by a suitable tool for pulling out the pin.

In this manner, the barrel is secured from the exterior of the housing, with the securing means under the control of the key. Removal of the plug 25 will not permit the removal of the pin while the cylinder is in locked position, as in Fig. 3, but the key must be inserted and turned to bring the groove 22 into registration with the pin. This permits licensed replacement of the lock without going into the inside of the lock housing, and effectually prevents illegitimate removal of the barrel to operate the bolt.

While I have illustrated but one particular form of lock housing and mechanism, it is to be understood that this invention may be incorporated in lock and bolt mechanism, without departing from the spirit of the invention, as defined in my claims, which are as follows:

1. The combination of a lock barrel having a key operated tumbler cylinder rotatably mounted therein, and a barrel retaining pin inserted transversely through one side of the barrel, so that the pin and cylinder intersect, the side of the cylinder being scored so that the pin can be inserted when the cylinder is in unlocked position, and the mid portion of the pin being relieved so that the cylinder can be rotated when the pin is fully inserted.

2. The combination of a lock barrel having a key operated tumbler cylinder rotatably mounted therein, and a barrel retaining pin extending transversely through one side of the barrel, the

pin and cylinder being in lateral intersecting relation, the side of the cylinder being cut away so that the pin can be inserted, and a mid portion of the pin being reduced in diameter so that the cylinder can be turned when the pin is inserted and said reduced portion of the pin is in registration with the cylinder.

3. The combination of a housing, a lock barrel inserted in the housing, a pin insertable into the housing to extend through one side of the barrel, a lock cylinder rotatably mounted in the barrel and having key operated tumblers for locking the cylinder in the barrel, the pin and cylinder being in lateral intersecting relation, the cylinder being scored at one side so that the pin can be inserted when the cylinder is in unlocked position, and a mid portion of the pin being relieved in diameter so that the cylinder can be rotated when the pin is inserted.

4. In a lock, a bolt housing, a cylinder lock barrel inserted in the housing from the exterior thereof, the barrel having a key operated tumbler cylinder rotatably mounted therein, and a pin inserted in the housing which laterally intersects the barrel and the cylinder therein, the pin having a reduced portion so that the cylinder may be rotated when the pin is fully inserted.

BURT H. LARSSON.