April 26, 1949. J. MORA 2,468,406

LOCK

Filed May 3, 1946

FIG. 1.

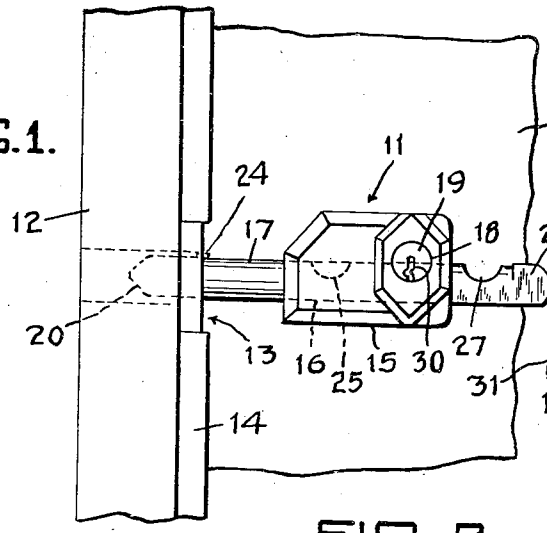


FIG. 4.

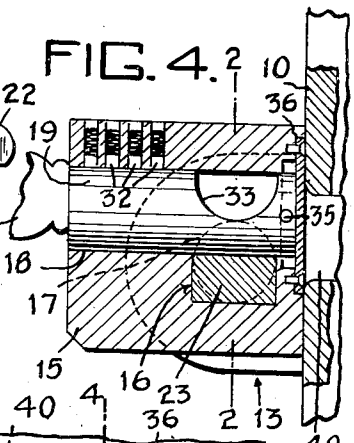


FIG. 2.

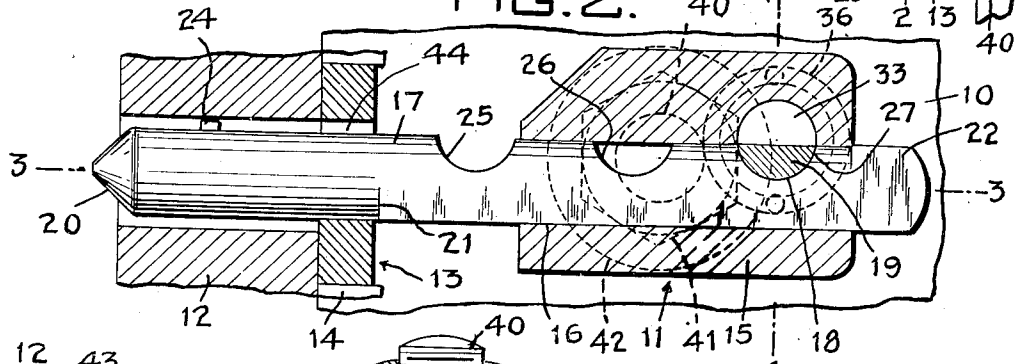
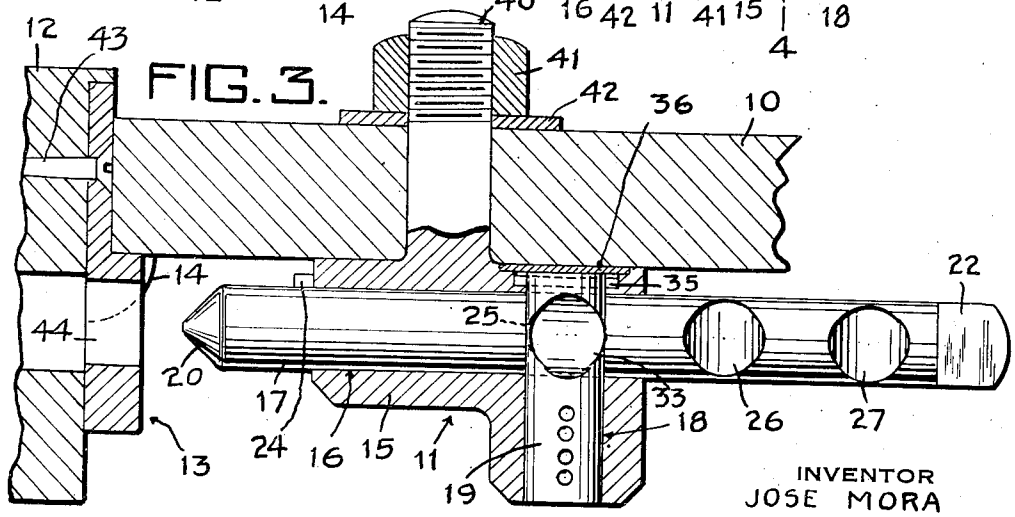


FIG. 3.



INVENTOR
JOSE MORA

BY Geo. A. Lemon

ATTORNEY

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LOCK

Jose Mora, New York, N. Y.

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1 Claim. (Cl. 70—129)

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The invention relates to locks and more particularly to a type of lock which employs a rotatable lock cylinder functioning in conjunction with a sildable lock bolt.

The object of the invention is to provide a lock which is of extreme simplicity and therefor economical to manufacture and easily installed. A further object is to provide a lock which is very rugged in construction and therefore practically burglarproof.

The lock is particularly designed to replace the well known hasp lock used on garage or store doors or for that matter on any door where it is desired to use a lock of great strength.

Other objects and advantages will become apparent as this specification proceeds. Referring to the drawings forming a part thereof and in which a preferred form of the invention is illustrated:

Fig. 1 is an elevational view showing the lock in position on a door. In this view the locking bolt in one of its locked positions;

Fig. 2 is a longitudinal sectional view on a larger scale and taken on line 2—2 of Fig. 4. In this view the locking bolt is in another one of its locked positions.

Fig. 3 is a longitudinal sectional view taken on line 3—3 of Fig. 2. In this view the locking bolt is locked in its open position; and

Fig. 4 is a cross-sectional view taken on line 4—4 of Fig. 2.

Referring again to the drawings the reference numeral 10 designates the door to which the lock 11 is to be attached and 12 the door jamb to which the keeper 13 is secured. The usual door stop is indicated at 14. The lock may be secured to either side of the door depending upon which way the door opens and the door jamb 12 might be another door of a pair of double doors.

The lock 11 comprises a body or block 15 having a longitudinal opening 16 formerly therein for the accommodation of the slidable locking bolt 17. Just above and intersecting the opening 16 is a transverse bore 18 to accommodate the lock cylinder member 19.

The slidable locking bolt 17 is tapered at one end 20 to facilitate its entrance into the keeper and from there on to a point 21 (see Fig. 2) is cylindrical. The opposite end 22 is rectangular in cross section to form a stop as hereinafter described and the lower half of the bolt between the squared end 22 and the point 21 is rectangular in cross-section as particularly indicated at 23 in Fig. 4. The opening 16 in the block 15 conforms to the shape of the bolt and thus any rotational movement of the bolt is prevented. The bolt is provided with another stop 24 toward its tapered end and the purpose of this stop will hereinafter become apparent. The upper rounded portion of the slidable locking bolt is provided with a plurality of semi-circumferential grooves or recesses, three being indicated at 25, 26 and 27.

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The forward part of the lock cylinder 19 is provided with a key hole slot 30 for the reception of a key 31 and the conventional spring pressed locking pins 32 cooperate with the serrations of a proper key so that the lock cylinder may be rotated 180° to either lock or unlock the locking bolt as hereinafter described. The rear portion of the lock cylinder is provided with a semi-circumferential groove or recess 33. The inside surfaces of the grooves or recesses in the bolt correspond in shape to the exterior of the bolt; and the outer surface of the bolt corresponds to the inside surface of the recess 33 in the cylinder 19.

In order to prevent longitudinal movement of the lock cylinder a pin 35 is passed through its rear end, beyond the groove 33 and the projecting ends of the pin are accommodated in a counter-bored portion of the bore 18. Thus forward longitudinal movement of the lock cylinder is prevented. A plate 36 suitably secured in position over the pin closes the counter-bore and prevents rearward movement of the lock cylinder.

The lock is secured in place by virtue of a stud 40 formed integral with or suitably secured to the block 15. This stud passes through an opening in the door 10 and is firmly secured thereto by a nut 41 and washer 42.

The keeper 13 is secured to the door jamb by suitable screws one of which is indicated at 43 and is provided with a suitable opening 44 for the reception of the slidable locking bolt.

In Fig. 1 the lock cylinder 19 is in engagement with the groove 26 in the slidable locking bolt, the bolt has entered the keeper and the door is locked. Insertion of the key 31 into its slot 30 and rotation of the lock cylinder 180° will bring the groove 33 over the bolt 17 and permit the bolt to be manually moved to either of its other two positions.

One may wish to enter the locking bolt further into the keeper, or the lock due to circumstances may be so positioned on the door that a maximum movement of the locking bolt is necessary to have it enter the keeper. The bolt is then manually pushed to the position of Fig. 2. At this time the squared end 22 of the locking bolt engages the block 15 and properly positions the bolt so that by rotation of the lock cylinder the

groove 33 will be moved out of engagement with the bolt and the solid part of the lock cylinder will enter the groove 27 in the locking bolt and the parts will be locked in this position.

When it is desired to open the lock and insure it staying open the locking bolt is manually moved toward the right in Figs. 1, 2 and 3 until the stop 24 engages the side of the block as illustrated in Fig. 3. At this time the groove 25 is in line with the lock cylinder and the lock cylinder is rotated until its solid part enters the groove 25. The key is then removed and thus the possibility of inadvertently moving the locking bolt to one of its locked positions is eliminated.

Several changes in details of construction and arrangement of parts as would occur to one skilled in the art are to be considered as coming within the spirit of the invention as set forth in the appended claim.

I claim:

A lock comprising a body, a bolt slidably mounted in said body and having transverse recesses formed side by side in its outer surface, a keeper having an opening to receive said bolt, the body having a bore and a rotatable lock cylinder therein disposed crosswise of said bolt, and bearing a recess formed therein and extending lengthwise of said bolt, the last-named recess having its inside surface shaped to permit longitudinal movement of the bolt with respect to the body, and the recesses in the bolt being shaped to permit rotary movement of the cylinder therein, said bolt projecting at both ends from said body and having stops to limit its movement in either direction, a stud projecting from the body for mounting and securing the lock in place, and a stop pin wholly within the lock to retain the cylinder in said bore.

JOSE MORA.

REFERENCES CITED

The following references are of record in the file of this patent:

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