June 21, 1932. W. GOROSHKO ET AL 1,864,429

LOCK

Filed Jan. 16, 1929

Fig. 1.

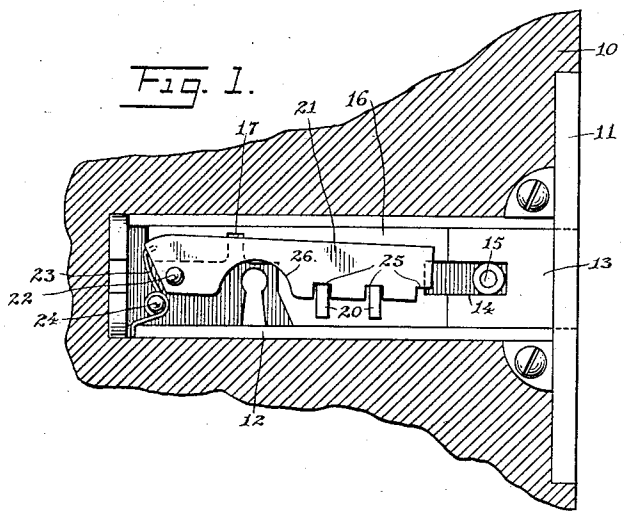


Fig. 2.

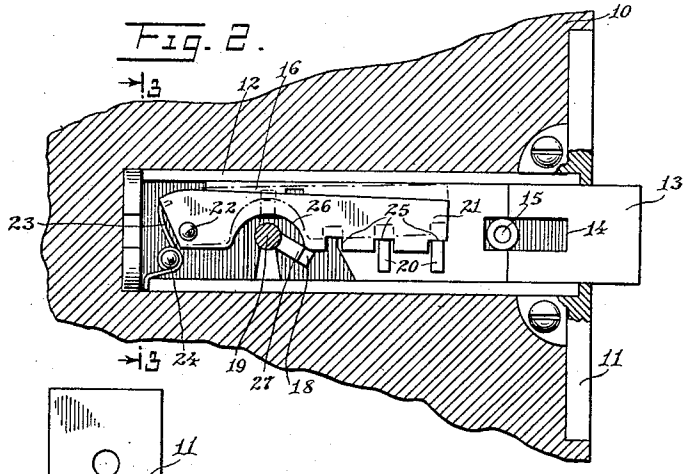


Fig. 3.

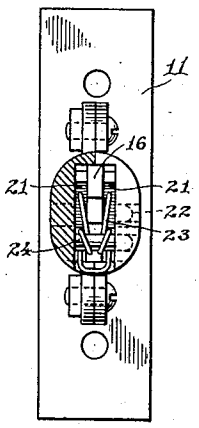
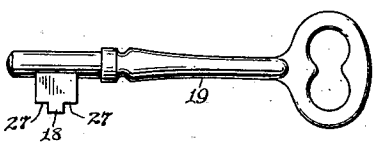


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE

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LOCK

Application filed January 16, 1929. Serial No. 332,936.

This invention relates to locks.

It is among the objects of the present invention to provide a new and improved lock for use as a closure fastener.

Another object of the present invention is to provide a lock including pivoted latch members, key controlled for permitting longitudinal movement of a locking bolt.

Another object of the present invention is to provide a lock in which the bolt after release by associated latch members may be moved in response to movement of a key within the lock.

Another object of the present invention is to provide a lock including a bolt and latch members for retaining said bolt, the arrangement being such that rotation of the key will release the latch members from the bolt and subsequently move the bolt.

Other objects of the invention include the combination and interrelation of parts, whereby the whole forms a novel, improved, compact and simple lock structure which is well suited to the demands of economic manufacture.

Numerous other objects and features of the present invention will be apparent from a consideration of the present invention taken in connection with the accompanying drawing, in which

Figure 1 is a side elevation of one form of our invention with the casing removed;

Fig. 2 is a similar view of the device with the bolt in protruding position;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2, and

Fig. 4 is a view of the type of key adapted for use in connection with our invention.

Referring more particularly to the drawing, the device is shown as positioned within a closure 10, provided with the usual apertured lock plate 11. The device includes a suitable casing 12, which is preferably oval in cross section. In connection with the present invention, it will be understood that the configuration of the cross section of the casing is suitably designed for any type of closure. The present invention, however, provides a lock so compact that a small oval casing as herein shown may be readily used and thus the closure with which the lock is associated may be controlled by two co-operating bores which provide an oval opening into which the lock may be readily placed.

Within the lock casing 12, there is provided a suitable locking bolt 13, which is adapted to enter the keeper to lock the closure in the usual manner. The bolt 13 is slidably positioned within the casing 12, its forward portion being apertured at 14 to provide for the passage therethrough of a retaining and guiding member 15. The rear portion of the bolt 13 is reduced as at 16, to provide a rearwardly extending central member notched as at 17, to receive the central bit 18 of the key 19, shown in Fig. 4.

The sides of the reduced portion 16 of the bolt 14 are provided with projections 20 adapted for engagement with pivoted latch members 21, which are shown as two in number, one on each side of the reduced portion of the bolt. The latch members 21 are pivoted as at 22, with respect to the casing 12 and normally urged in clockwise rotation about their pivots through the medium of springs 23 secured to the casing as at 24. The forward portions of the latch members on the under side thereof are provided with cut-out portions 25 for the reception of the projections 20 in either the extended or withdrawn position of the bolt 13. Intermediate the ends of the latch members 21 and adjacent the cut-out portion 17 of the bolt 13, when the bolt is in retracted position, the latch members are provided with camming surfaces which are adapted to co-operate with the shoulders 27 of the key 19.

The operation of the device is as follows:

With the bolt 13 in the retracted disengaged position as shown in Fig. 1, the key

19 is inserted within the casing and rotated in a clockwise direction, the shoulders 27 of the key 19 co-operating with the camming surface 26 of the latch members 21 to raise them about their pivots 23 against the tension of the spring 22 and in counterclockwise direction, whereby the recesses 25 are withdrawn from engagement with the projections 20, the latch members being retained in this position due to the configuration of the camming surface, while the central bit 18 engages the aperture 17 of the bolt, camming the bolt forwardly to the extended position as shown in Fig. 2. When the key 19 reaches the position as shown in Fig. 2, it will be seen that the shoulders 27 permit downward movement of the latches, whereby the portions 25 engage the projections 20 to retain the bolt in the extended position.

The reverse movement of the lock will be readily understood from the foregoing. The key is turned in counter direction whereupon the shoulders 27 raise the latches and release the projections 20, the portions 18 of the key engaging the portions 17 of the bolt and causing its movement to the retracted position as shown in Fig. 1.

In connection with the present invention it will be understood that the invention is not confined to the specific structural details herein disclosed and that the number of latches or number of bolts used in connection with the present invention, is not confined to the simple structure herein disclosed. It will be further understood that the camming surfaces of the latch members may vary and the configuration of the key vary in accordance therewith. It will be readily seen that should the shoulders of the key be below that required for the specific lock, the latches will fail to release the projections 20, and that should the shoulders be of greater size than demanded by the lock, the key will not be permitted its full revolution to move the bolt outwardly.

Numerous changes and modifications of the invention and the full use of equivalents may be resorted to without departing from the spirit or scope of the invention as outlined in the appended claim.

What is claimed is:

In a device of the character described, a casing having a side, a top and a bottom, a bolt slidable at the bottom of the casing and with its top at the top of the casing, the sides of the rear of the bolt being cut away and the rear of the bolt at its bottom being cut away and there being in the rear of the bolt a key-engaging recess which extends downwardly to the rear cut-away portion, projections at the sides of the bolt, two latch members disposed one at the cut-away portion at each side of the bolt, the latch members being pivoted at the rear of the casing with the pivot disposed in the said rear cut-away portion of the bolt, each of the said latch members having two recesses extending through its bottom in which the projections may be disposed, there being also key-engaging camming surfaces in the latch members between their pivots and the recesses in the latch members, there being a keyhole in the bottom of a side of the casing at the cut-away portion of the bolt adjacent the recess in the bolt and the camming surfaces on the latch members, and a spring at the rear of the casing, the spring engaging the rear of the latch members for holding the latch members yieldingly in operative position.

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