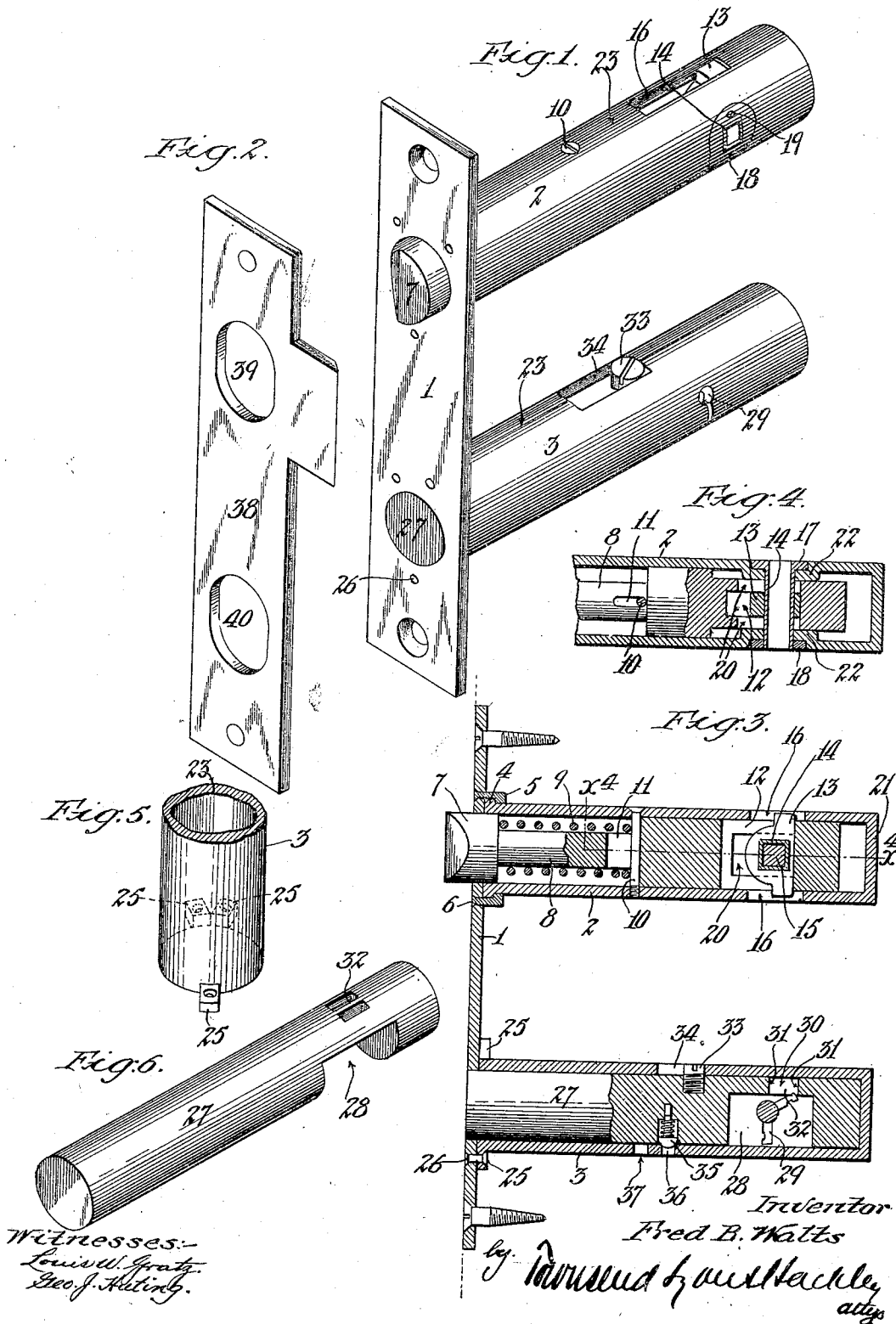


F. B. WATTS.
LOCK.

APPLICATION FILED AUG. 25, 1909.

953,874.

Patented Apr. 5, 1910.



UNITED STATES PATENT OFFICE.

FRED B. WALTS, OF LOS ANGELES, CALIFORNIA.

LOCK.

953,874.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed August 25, 1909. Serial No. 514,633.

To all whom it may concern:

Be it known that I, FRED B. WALTS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Lock, of which the following is a specification.

This invention relates to locks, and the main object of the invention is to so construct the casing of the lock that it may be received by circular cavities formed in the stile of the door. Such circular cavities or sockets may be easily formed by simply drilling into the stile of the door with a bit of the size which will receive the cylindrical casing of the lock, thereby avoiding mortising as is required for locks of the ordinary construction.

A further object of this invention is to enable the latch bolt casing to be reversed so that the latch bolt will operate against the strike plate from either side desired.

Another object is to so form the parts that they may be constructed of sheet metal.

Other objects of the invention relate to details of construction, as will be pointed out in the following description.

Referring to the drawings:—Figure 1 is a perspective view of the lock. Fig. 2 is a perspective view of the strike plate. Fig. 3 is a longitudinal, vertical section through the entire lock, showing both the latch bolt and its casing and the locking bolt and its casing in section. Fig. 4 is a horizontal, longitudinal, sectional view through the latch bolt on line x^1-x^1 Fig. 3. Fig. 5 is a perspective view of the outer end of the locking bolt casing. Fig. 6 is a perspective view of the locking bolt.

1 designates the frame plate of the lock to which the latch bolt casing 2 and locking bolt casing 3 are attached, the former being revolvably secured thereto, and the latter being fixedly secured thereto. Both latch bolt and locking bolt casings are cylindrical in form. As shown in Fig. 3, the latch bolt casing at its inner end is formed with a flange 4 which is revolvably supported by a shouldered sleeve 5 which is secured to the plate 1 by rivets 6.

Slidable within the casing 2 is a latch bolt 7 having a reduced shank 8 encircling which is a coil spring 9, the inner end of which abuts against a screw 10 which extends diametrically through the casing 2 and through a slot 11 formed in the latch bolt shank 8.

The coil spring 9 serves to normally hold the latch bolt in extended position. The latch bolt also has a circular slot 12 which receives a roll-back 13, the latter being mounted on a square sleeve 14 which serves to prevent the roll-back from dropping out of place when the spindle 15 is removed. The roll-back 13 may be inserted through slots 16 formed in the casing 2. The ends of the square sleeve 14 are supported by disks 17 and 18, the former being preferably formed in one piece with the sleeve 14, and the latter being detachably secured to the sleeve by a set screw 19. The latch bolt is also provided with a horizontal slot 20 which is of sufficient width to permit rotation of the square sleeve 14 and permit sliding motion of the latch bolt when the roll-back 13 is turned in either direction.

The rear end of the casing 2 is closed by a wall 21. The casing 2 is flattened on each side at 22 and the latch bolt is also flattened at this point so as to freely slide between the sunken portions 22, the purpose of the latter being to provide seats for disks 17 and 18 so located that the disks do not project beyond the contour of the main cylindrical casing 2, so that the casing 2 may be slipped into its socket in the stile of the door without difficulty.

It is preferred to construct the casing 2 of sheet metal, the edges coming together at 23, as indicated in Fig. 1, the various slots and orifices therein being formed by a die before the metal is rolled into the cylindrical form. By revolving the casing 2 in the sleeve 5 the beveled portion of the latch bolt 7 may be caused to face in either direction, according to whether it is desired to have the door swing outwardly or inwardly.

3 designates the locking bolt casing which is formed with three lugs 25 on its end. Rivets 26 fasten through the respective lugs 25 and through the frame 1 to secure the casing 24 in position. Slidable in the casing 24 is the locking bolt 27, it having a cut-away portion 28 which permits the bit 29 of the key to turn in without obstructing the movement of the locking bolt, and is also provided with a slot 30 forming opposite faces 31 against which the bit 29 of the key is adapted to bear and slide the locking bolt in either direction. As shown in Fig. 6, a bridge 32 extends through the slot 30 to necessitate a corresponding notch in the bit of the key and thus make it difficult to

work the lock except with a key having a bit properly shaped to conform to the exact width and precise location of the bridge 32. Thus by varying the width of the bridge 32, 5 and by varying its location, it is possible to produce many combinations. A stud 33 is screwed into locking bolt 27 and slides in the slot 34 formed in the casing 24 and serves to prevent rotation of the locking 10 bolt and also limit its sliding movement in either direction. A spring pressed detent 35 having a round nose is slidably mounted in the locking bolt 27 and is adapted to yieldingly engage perforations 36 or 37 in 15 the casing 24 and thus act to position the locking bolt in either of its two positions and prevent it from accidentally jarring loose or slipping out of position when in 20 locking bolt is actuated by the key.

38 designates the strike plate having elongated slot 39 adapted to receive the latch bolt, and elongated slot 40 adapted to receive the locking bolt 27. The object of 25 elongating the slots 39 and 40 is to permit either locking bolt or latch bolt to enter even though the door should sag.

What I claim is:—

1. A lock comprising a frame, a cylindrical latch bolt casing formed of sheet metal 30 revolubly secured thereto, and a latch bolt in said casing, the side walls of said casing being depressed to form flattened sides, the shank of the latch bolt being flattened to 35 pass between said flattened sides.

2. A lock comprising a frame, a cylindrical latch bolt casing formed of sheet metal revolubly secured thereto, a latch bolt in said casing, the side walls of said casing being 40 depressed to form flattened sides, the shank of the latch bolt being flattened to pass between said flattened sides, a square sleeve passing loosely through the shank of the

latch bolt and being rotatably mounted in opposite walls of the casing, and a roll-back 45 carried by said sleeve for actuating the latch bolt.

3. A lock comprising a frame, a cylindrical latch bolt casing revolubly secured thereto, a latch bolt in said casing, said casing 50 having flattened sides, the shank of the latch bolt being flattened to pass between said flattened sides, a square sleeve passing loosely through the shank of the latch bolt and being rotatably mounted in opposite 55 walls of the casing, and a roll-back carried by said sleeve for actuating the latch bolt, disks on both ends of the square sleeve, one of said disks being detachable.

4. A lock comprising a frame plate, a 60 latch bolt casing comprising a cylindrical tube, the outer end of which has an outwardly directed flange, a sleeve secured to the frame plate and having an inwardly directed flange engaging said flange on the 65 tube, a latch bolt in said casing with its end revoluble in the frame plate, and latch mechanism for operating said latch bolt.

5. In a lock, a frame plate, a locking bolt casing rigidly secured thereto, a cylindrical 70 locking bolt in said casing, said locking bolt having a cut-away portion to freely receive the bit of a key and having a slot forming bearing portions adapted to be actuated by 75 the bit of the key, a bridge extending across said slot, and a stud screwed to the locking bolt, the casing having a slot to receive said stud to prevent revolution of the bolt in its casing.

In testimony whereof, I have hereunto set 80 my hand at Los Angeles, California, this 18th day of August 1909.

FRED B. WATTS.

In presence of—

G. T. HACKLEY,
FRANK L. A. GRAHAM.