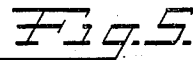
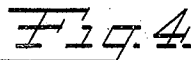
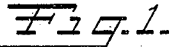


LOCK.

977,688.

2 SHEETS--SHEET 1.



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LOCK.

APPLICATION FILED SEPT. 9, 1910.

977,688.

Patented Dec. 6, 1910

2 SHEETS—SHEET 2.

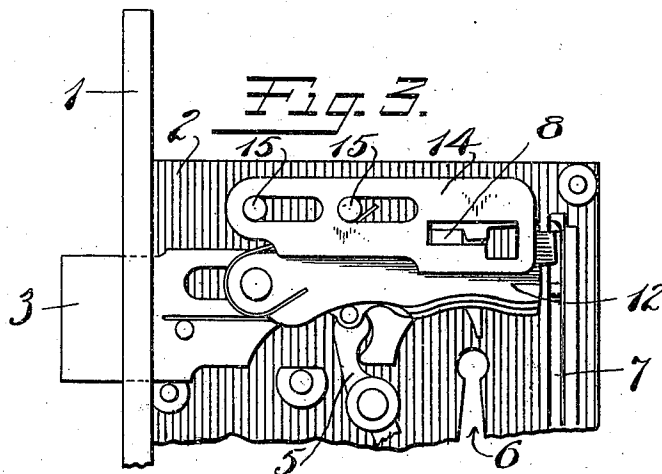
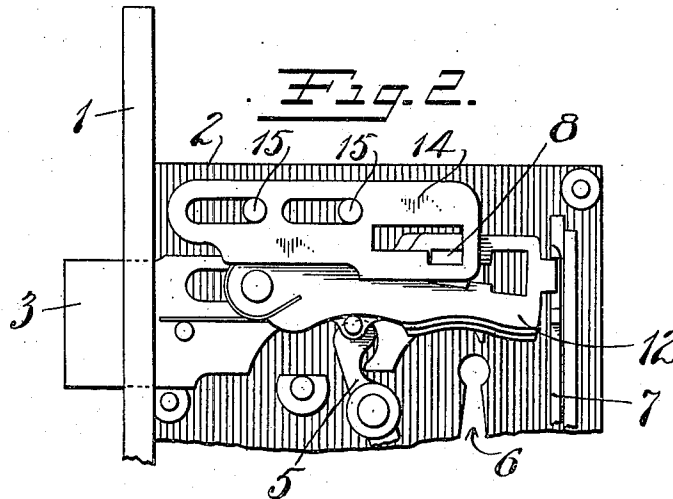
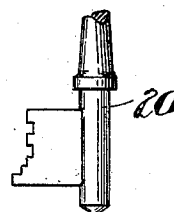
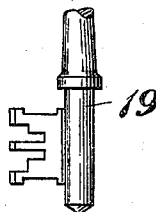
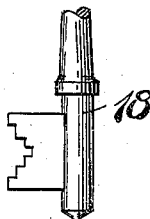


Fig. 6. Fig. 7. Fig. 8.



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LOCK.

977,688.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed September 9, 1910. Serial No. 581,207.

To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Locks, of which the following is a full, clear, and exact description.

My invention relates to certain new and useful improvements in locks particularly adapted for use in connection with hotel doors.

The object of the invention is to provide means whereby the holder of a special key, for example, the proprietor of the building, may lock the door to which the lock is applied in such manner that it cannot be unlocked by any other except the same, or a duplicate key. This object I attain in a distinctly novel and yet simple and effective manner as will hereinafter be explained.

In the accompanying drawings Figure 1 is a side elevation of a lock with the cap of the case removed showing the lock mechanism in elevation, the bolts being retracted. Fig. 2 is a similar view partly broken away and showing one of the bolts as having been projected by one of the keys adapted to the lock. Fig. 3 is a similar view showing parts as they would appear when the same bolt has been projected by another of the keys adapted to the lock. Figs. 4 and 5 are side elevations of details. Figs. 6, 7 and 8 illustrate the bitted ends of different keys adapted to operate the lock.

1 represents the face plate of a mortise lock; 2 represents the case of such a lock the cap being removed; 3 and 4 represent respectively the upper and lower dead bolts. So far as concerns the invention broadly the improved parts need be connected and associated with only one of the dead bolts and hence no detailed description of the other bolt is needed. In the particular type of lock which I have elected to show herein the same is provided with said two dead bolts and is also provided with the usual inner and outer key holes, one being located in a plane above the other, whereby even though a key occupies the key hole at the inner side of the lock said lock may be operated by a key inserted in the key hole

at the outer side of the lock. Since said locks are well-known no detailed description will be required.

5 represents a walking beam customary in such locks for transmitting movement from one of the bolts to the other. For example, should a door provided with such a lock, be locked from the inside through a medium of the lower bolt 4, anyone could gain admission from the outside by inserting a proper key in the outer key-hole 6, advancing the bolt 3 and then retracting the same, the advance movement (through the medium of the walking beam 5) retracting the bolt 4 in the usual well-known manner, the tumbler mechanism of both bolts being operated in the usual way by the bar 7.

Having thus outlined in a general way, the lock which I have elected to particularly illustrate, I will now proceed to describe those features which relate more particularly to my invention. Whereas heretofore it has been customary to form the so-called "fence" rigidly upon the tail of the dead bolt, in the present instance I have mounted said fence in such a way upon the tail of the bolt that it may be moved to different positions independently of the bolt and for the purposes later described. Referring to Fig. 5 attention is directed to the fence represented at 8. This fence is carried on the tail of the bolt 3 by a suitable movable plate 9, which in this particular instance is pivoted at 10. 11 is a spring which is preferably provided to hold the fence down. Any suitable number of tumblers 12—12 may be employed. The plate 9 preferably lies alongside of tumblers so that it may be actuated by a suitable bit on the key. 14 is a plate mounted to slide to and fro on guide pivots 15—15. The slide 14 is provided with what I will term two steps, namely, a lower step 16 and an upper step 17. The fence 8 not only passes through the gated passages in the several tumblers 12 but its end also projects over and stands upon one or the other of the steps 16—17 of the slide 14. 18 represents the "change" key, or what would be termed the guest's key in a hotel; 19 represents the "master" key, or what would be termed the maid's key in a hotel; while 20 represents the "emergency" key or what

would be termed the proprietor's key. These keys have different bittings for the purpose hereinafter described.

Operation: Assuming the change key 18 is employed, upon inserting said key in the key-hole 6 (Fig. 1) and turning the same in the proper direction, it will lift the tumblers 12 so as to bring the gated passages therein in front of the fence 8 whereupon a continued rotation of the key in the same direction will project the bolt 3 forwardly, the slide 14 and the fence 8 traveling forward with said bolt, said fence passing freely through said tumbler passages until all the parts will stand in the position indicated in Fig. 2. A reverse movement of the same key 18 under such conditions will restore the parts to that position shown in Fig. 1. The same result may be effected by using the master key 19, the only advantage of the master key being as usual, namely, to provide a single key suitable for the operation of as many different locks as desired.

When the emergency key 20 is employed a different action takes place as follows: If the emergency key is inserted through the key-hole 6 (Fig. 1) and turned in the proper direction to advance the bolt 3 it will both lift the fence-carrying plate 9 and fence 8 to the level of the upper step 17 and at the same time bring the gated passages in the tumblers into proper alinement to permit the passage of said fence when at said higher elevation, so that a continued rotation of the key will advance the bolt 3 together with the fence 8 moving the latter on to the upper step 17 of the slide plate 14 so that the parts will assume the position indicated in Fig. 3, the slide 14 having remained in its original position. It will now be apparent that the bolt 3 cannot possibly be retracted by either key 18 or 19 since the biting on such keys is not equal to the task of lifting the tumblers 12 to such an elevation as to line up the gated passages to the rear of the fence 8 so long as the latter stands on the upper step 17. While any suitable means may be provided to prevent the accidental shifting of the slide plate 14 during this advance of the fence 8 it may be assumed in the present instance that such plate is mounted friction-tight upon the pivots or studs 15-15, said friction being sufficient for the purpose mentioned. From the foregoing it will be apparent that the provision in the lock of the shiftable fence 8 with means to hold the same at different elevations is the main means relied upon for accomplishing the desired results, the same being, as I believe, broadly new in the art and particularly so when considered in connection with

the co-related parts, their form, arrangement and mode of operation.

What I claim is:

1. In a lock, a movable bolt, a tumbler a fence movable by the bolt and carried thereby and also movable to different positions across the path of movement of said bolt incidental to the movement of the tumbler in the act of operating the lock, with means also movable with said bolt for holding said fence in at least two of said different positions, said tumbler having a gated passage arranged to permit the passage therethrough of said fence, one means to lift said tumbler to one elevation to permit the passage of said fence when the same is in one of said two positions and another means to lift the tumbler to another elevation to permit the passage of said fence when the latter is in the other of said two positions.

2. In a lock, a bolt movable to and fro in one plane, a tumbler, a fence carried by and movable by the bolt and also movable transversely of the plane of movement of the bolt incidental to the movement of the tumbler in the act of operating the bolt, means also movable with said bolt for holding said fence in at least two of said positions, said tumbler arranged to co-act with the fence, a key to operate said tumbler to permit the passage therethrough of the fence when the latter stands in one of said transverse positions, and another key arranged to operate said tumbler to advance the fence through the tumbler when said former stands in the other transverse position.

3. In a lock, a reciprocating bolt, a swinging member pivoted thereto and carrying a fence, a slide having two step supports for said fence, a gated tumbler for said fence, one means to operate said tumbler to move said bolt and to pass said fence through said tumbler when the latter stands on one step but not on the other, and another means to lift both said tumbler and said fence and to shift the latter on to said other step by passing the same through said gated tumbler.

4. In a lock, a bolt, a tumbler, a fence carried by said bolt and movable with said bolt in one plane and independently of said bolt in another plane, means for supporting said fence at two different elevations, said means being movable dependently with, and independently of, said bolt, in the act of operating the lock, said fence controlling said tumbler.

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Witnesses:

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