

H. G. VOIGHT.

LOCK.

APPLICATION FILED JUNE 1, 1911.

1,018,998.

Patented Feb. 27, 1912.

2 SHEETS—SHEET 1.

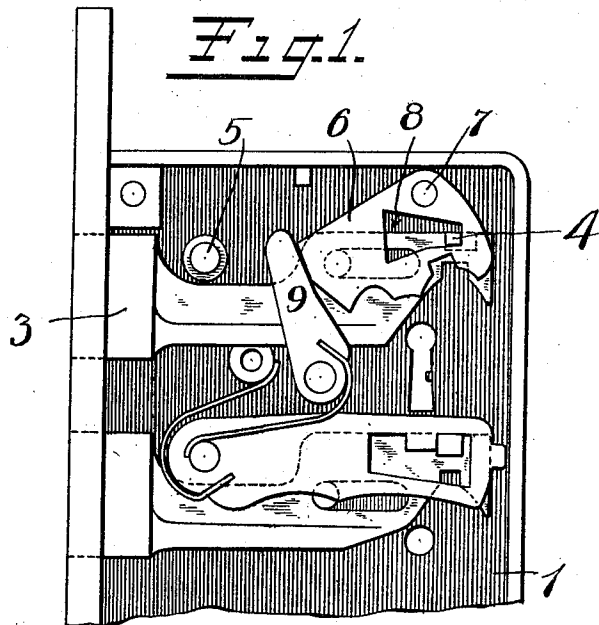


Fig. 7. Fig. 8.

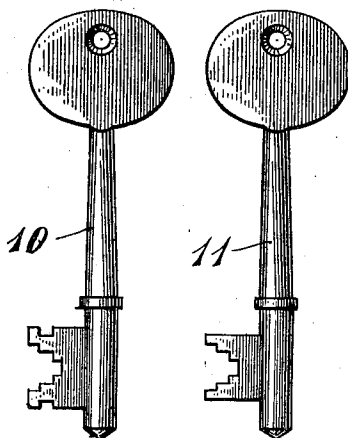
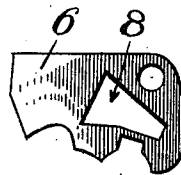


Fig. 6.



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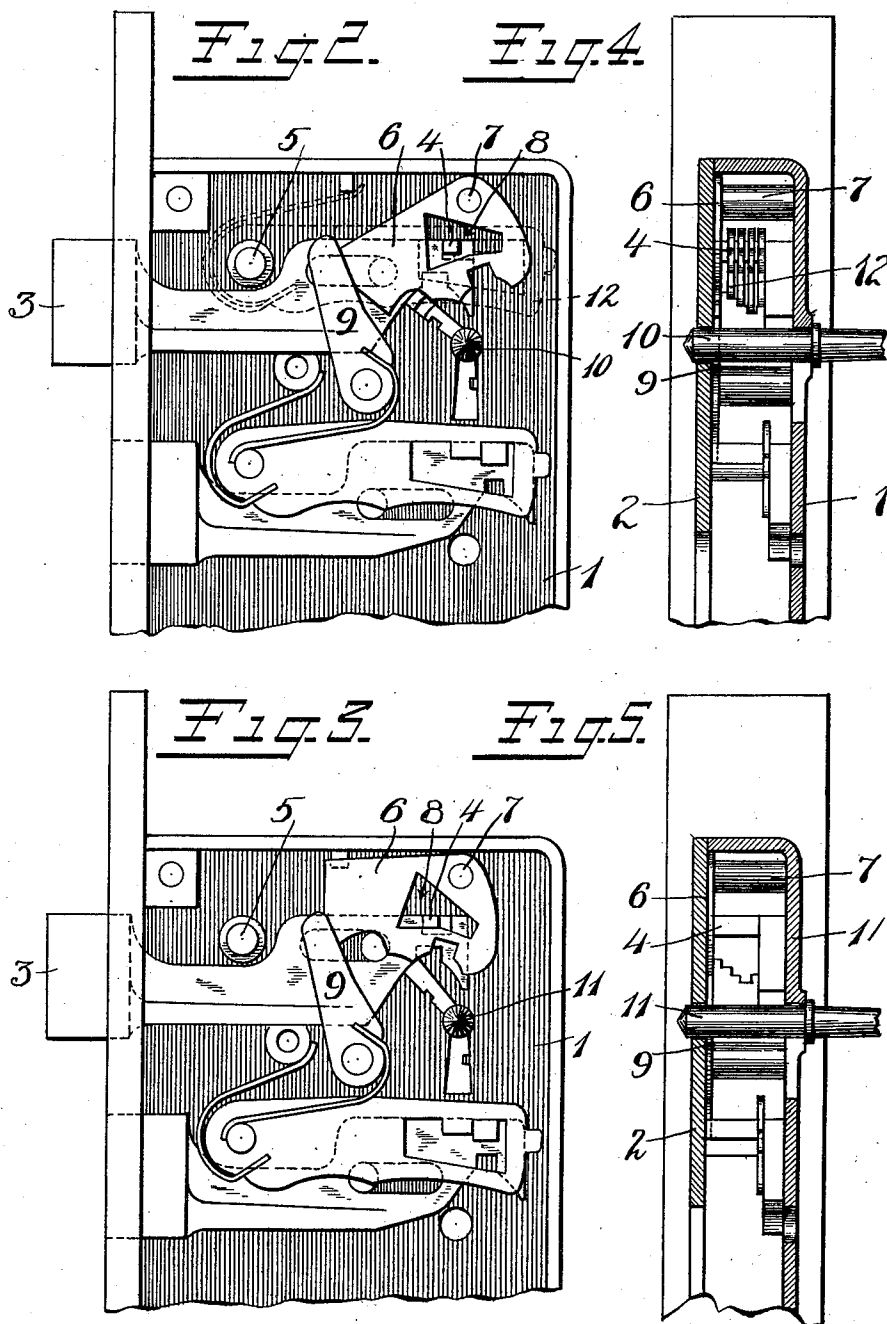
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO RUSSELL & ERWIN MANUFACTURING COMPANY, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

LOCK.

1,018,998.

Specification of Letters Patent.

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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 improvements in locks, the object being to provide means whereby, by the use of a proper key, the lock may be rendered inoperative by any other key, otherwise appropriate, for operating the bolt.

The invention is of particular utility when employed in a hotel or dormitory wherein there are a number of different rooms or apartments, each of which is provided with a bolt adapted to be operated by its own key respectively, and all of which are adapted to be operated by an emergency or proprietor's key. In such cases, it not infrequently happens that it is the desire of the proprietor to lock off certain rooms. To that end, his key is so constructed, and the locks are so constructed that it is within the power of the holder of the proprietor's or guard key, as I shall term the same, to operate any one of the series of locks in such a way that is impossible to gain entrance through the medium of a different key that would otherwise operate said lock.

In the accompanying drawings, Figure 1 is a side elevation of the upper part of a lock with the cap removed, the dead bolt being retracted; Fig. 2 is a similar view showing the parts with the dead bolt advanced by means of the proprietor's key; Fig. 3 is a similar view showing the dead bolt advanced by means of the change or guest key; Fig. 4 is an end elevation of the parts shown in Fig. 2, the case being shown in section on the plane of the keyhole; Fig. 5 is a similar view showing the parts in the position indicated in Fig. 3; Fig. 6 is a side elevation of what I will term the blocking device, detached; Fig. 7 is a view of the change key; Fig. 8 is a view of the guard key.

1 represents a lock case having the usual cap 2.

3 is a dead bolt.

4 is a fence on the tail of the dead bolt.

The usual tumblers (not shown) are provided for controlling the operation of the

bolt through the medium of the fence. Such tumblers are too well known and understood to require special description, but a dotted outline of one of such tumblers is indicated in Fig. 2. Such tumblers are usually mounted upon a stud 5.

6 is a blocking device, said blocking device partaking of a swinging movement only.

7 is a pivotal support on the case 1 for the blocking device 6.

The blocking device 6 has a slot therein, as indicated at 8, the upper edge of said slot being shouldered or arranged obliquely for the purpose hereinafter described. The fence 4 passes through the slot 8.

9 is a friction piece arranged to yieldingly hold the blocking device 6 in either one of two different positions, one position being shown in Fig. 1, the other position being shown in Fig. 3.

10 is what I will term the change or guest key.

11 is what I will term the guard or proprietor's key.

It will be observed that the bitted end of the change key is wider than the bitted end of the guard key the greater width in this particular case providing a part or parts on the key 10 which will serve to operate the blocking device 6.

Now, starting with the parts as shown in Fig. 1, if the change key is inserted and turned counter-clockwise, it will first engage the tail of the bolt 3, pushing it slightly ahead. One edge of the bitted portion of the key 10 will then encounter a shoulder on the swinging blocking device 6 so that a continued rotation of said key in the same direction will swing said blocking device from the position shown in Fig. 1 to the position shown in Fig. 3. During this movement it will be observed that the fence travels freely forward in the slot 8. If a clock-wise movement is now imparted to the change key 10, it will first strike the tail of the bolt, partially retracting said bolt, and will then engage a shoulder on the blocking device so as to swing the latter back into the position shown in Fig. 1. It will thus be seen that by the use of the change key, the bolt may be freely advanced and retracted, the retraction of the bolt being permitted provided the blocking device stands in the position indicated in Fig. 3. In this connection, it should,

of course, be understood that the bitting of such key is appropriate to the tumblers ordinarily employed, an outline of one of which is shown at 12, (Fig. 2). Should the proprietor desire to lock the door so that admission to the apartment cannot be gained by the use of the change key otherwise adapted to the lock, he has but to insert the guard key 11 into the keyhole when the parts stand as shown in Fig. 1, and turn it in a counter-clock-wise direction. This movement advances the dead bolt 3 to the position shown in Fig. 2, but, inasmuch as the guard key is not adapted to swing the blocking device 6 on this movement, it follows that the bolt will be advanced from the position shown in Fig. 1 to that shown in Fig. 2, the blocking device being left in its original position. If the guard key is now withdrawn, it will be impossible to retract the dead bolt by the use of the usual change key, because, when the change key is inserted, it can only be turned to the position indicated in Fig. 2, in which position, the bit of the change key will strike against a shoulder on the blocking device 6. This shoulder is so placed that the pressure of a key against the same will tend merely to force the blocking device against its pivot 7 without exerting a tilting influence; in other words, said blocking device is on a dead center. Since the change key cannot be turned clock-wise to a greater extent than that indicated in Fig. 2, it follows that the dead bolt 3 cannot be retracted under such conditions.

To unlock the door when the parts stand as shown in Fig. 2, the guard key, or a duplicate thereof, is required. Its action will be as follows: When the guard key is inserted in the keyhole and turned clock-wise, it freely passes by the blocking device 6 and engages the bolt tumblers, shifting the same to the bolt releasing position, whereupon the bolt 3 is readily retracted by the further turning of the guard key, the fence 4 moving freely to the right in the slot of the blocking device. Should the parts be in the position shown in Fig. 3, the bolt may still be freely retracted by the guard key (as well as the change key), the movement of the bolt in a rearward direction causing the fence 4 to strike against the upper wall of the slot so as to trip the blocking device and shift it from the position indicated in Fig. 3 to that indicated in Fig. 1, thus restoring the parts to their normal or starting position, wherein it is possible to operate the bolt by either key to advance the same.

It will be observed that the only coöperation between the fence 4 and the blocking device 6 is for the purpose of restoring the blocking device to the position shown in Fig. 1 in the event the guard key alone is employed for the purpose of retracting the bolt from the position shown in Fig. 3. It

will furthermore be observed that the fence 4 has nothing to do with holding the blocking device 6 in either of its two positions.

While I have shown the position of the blocking device at one side of the position to be occupied by the ordinary tumblers, obviously the particular position of the blocking device is immaterial so long as the keys are appropriately bitted.

What I claim is:

1. In a lock, a reciprocating bolt, a pivoted swinging blocking device, a key bitted to simultaneously advance or retract said bolt and swing said blocking device to and fro, another key arranged to operate said bolt independently of any movement of the blocking device and a shoulder on the sweep of said blocking device arranged to be shifted to a position between the key bit and the pivot of said blocking device to prevent the retraction of the bolt by the first mentioned key after said bolt has been advanced by the second mentioned key.

2. In a lock, a reciprocating bolt, a pivoted swinging blocking device, a key bitted to simultaneously advance or retract said bolt and swing said blocking device to and fro, another key arranged to operate said bolt independently of any movement of the blocking device, a shoulder on said blocking device arranged to be shifted to a position between the key bit and the pivot of said blocking device to prevent the retraction of the bolt by the first mentioned key after said bolt has been advanced by the second mentioned key, means to hold said blocking device in blocking and unblocking position and means to swing said blocking device rearwardly into its blocking position when said bolt is retracted by said second mentioned key.

3. In a lock, a reciprocating bolt, a swinging blocking device, a key bitted to simultaneously advance or retract said bolt and swing said blocking device to and fro, another key arranged to operate said bolt independently of any movement of the blocking device, a shoulder on said blocking device arranged to prevent the retraction of the bolt by the first mentioned key after said bolt has been advanced by the second mentioned key, and means to swing said blocking device rearwardly into its blocking position when said bolt is retracted by said second mentioned key, said means comprising a shoulder on the bolt and a coöperating shoulder on the blocking device.

4. In a lock, a reciprocating bolt, a swinging blocking device, a key bitted to simultaneously advance or retract said bolt and swing said blocking device to and fro, another key arranged to operate said bolt independently of any movement of the blocking device, a shoulder on said blocking device arranged to prevent the retraction of

the bolt by the first mentioned key after
said bolt has been advanced by the second
mentioned key, means to swing said block-
ing device rearwardly into its blocking posi-
5 tion when said bolt is retracted by said sec-
ond mentioned key, said means comprising a
shoulder on the bolt and a cooperating
shoulder on the blocking device, the shoul-
der on the bolt being the usual fence thereon.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
