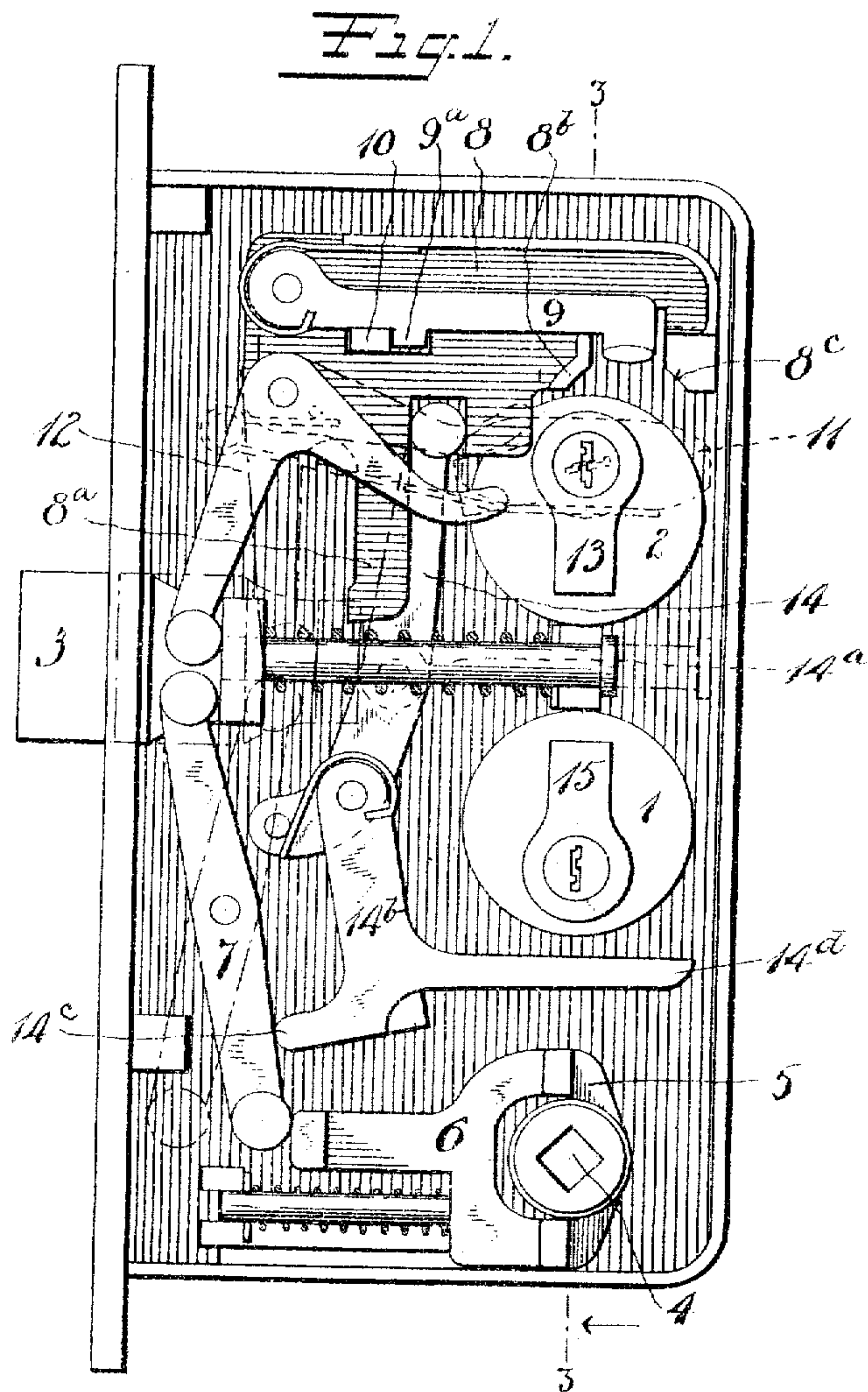


No. 845,020.

PATENTED FEB. 19, 1907.

H. G. VOIGHT.
CORRIDOR DOOR LOCK.
APPLICATION FILED OCT. 17, 1906.

2 SHEETS—SHEET 1.



Witnesses
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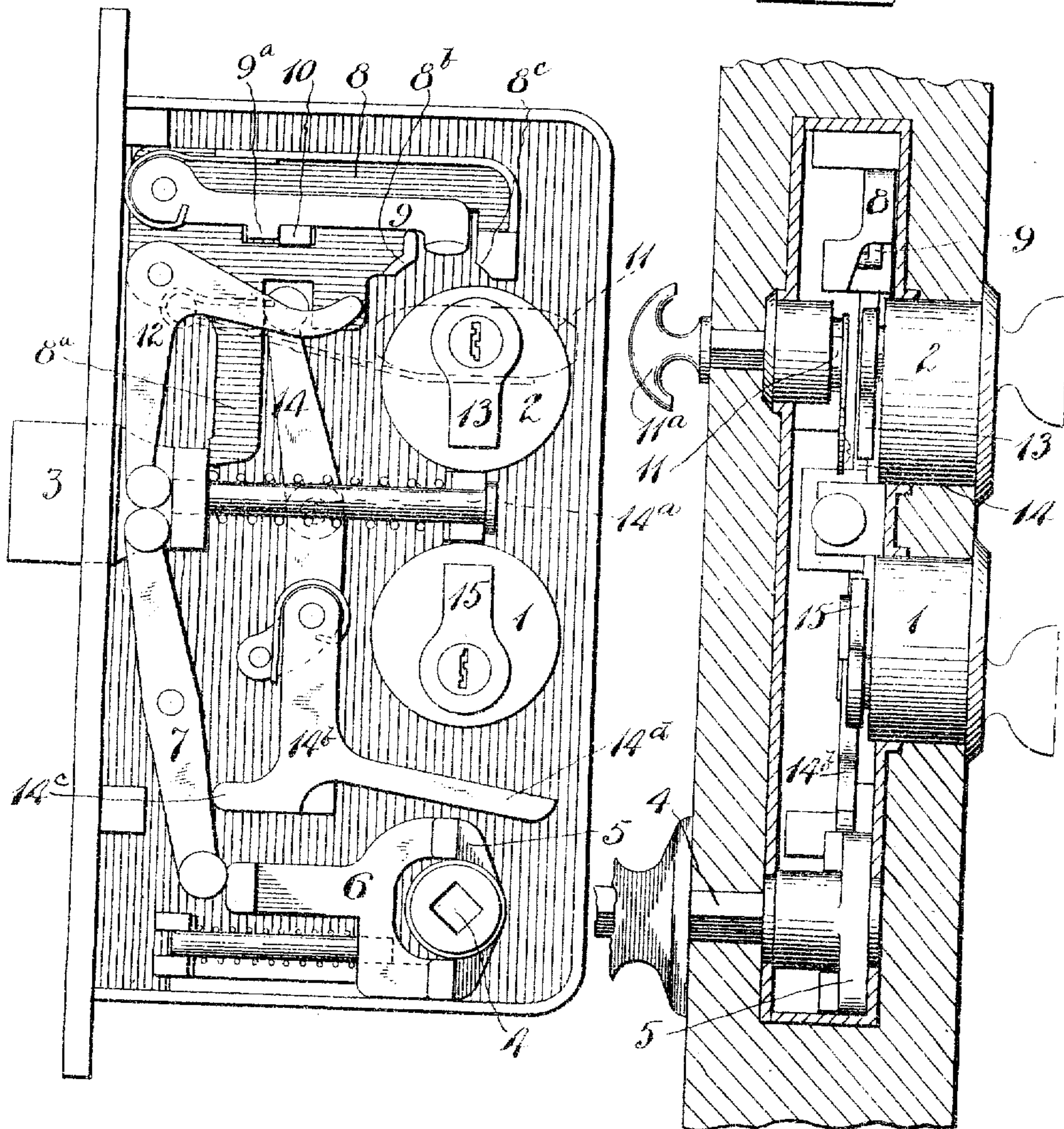
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2 SHEETS—SHEET 2.

Fig. 2.

Fig. 3.



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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.

CORRIDOR-DOOR LOCK.

No. 845,020.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed October 17, 1906. Serial No. 339,293.

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, Connecticut, have invented certain new and useful Improvements in Corridor-Door Locks, of which the following is a full, clear, and exact description.

This invention relates to improvements in locks, and is particularly useful in connection with corridor-doors for hotels and the like. In such locks it is desirable to have a dead-locking device for the inner side of the door, which device when thrown into action makes it impossible to operate the latch-bolt by means of anything but a special key, called a "grand master-key," which will operate both the bolt-actuating means, as well as the dead-locking means. By this arrangement the guest may have one key adapted to operate a single lock from the outside of the door, but not the dead-lock. The floor attendant may have a master-key adapted to operate the bolt-retracting means in any group of locks, but not any lock which has been dead-locked from the inner side of the door. The proprietor may have a third key, which is termed the "grand master-key," by which he may unlock any door on any floor whether it is dead-locked or not. The construction is also such that when the door is dead-locked no key but the grand master-key will have any effect whatever upon any of the locks, and any one attempting to use a key excepting said grand master-key may insert the same in the keyhole and turn it freely without meeting any obstruction. This relieves all strain on the lock mechanism and all danger of breaking a key. These objects and others are attained, as will be apparent to mechanics skilled in the art from a reading of the following description.

In the accompanying drawings, Figure 1 is an elevation of a lock with the side removed to show the internal arrangement of parts, said parts being in a position where the dead-lock is thrown off. Fig. 2 is a similar view, the dead-lock being thrown on. Fig. 3 is a section on the line 3-3 of Fig. 1.

The usual lock-case is provided, in which is contained the various operating parts. In this construction the outer side of the lock is

fitted with two pin-tumbler locks of the cylinder type, one of which is to take the change-key, as well as the master-key, while the other is to take the grand master-key.

1 is the lock adapted to the change and master keys.

2 is the lock adapted to the grand master-key.

3 is a latch-bolt having the usual guiding-stem and spring-pressed in the usual manner to cause it to be normally projected.

4 is the usual knob-spindle carrying the roll-back 5, while 6 is the slide actuated thereby.

7 is a pivoted lever engaged by slide 6 at one end, the other end making operative engagement with the latch-bolt 3.

The knob-spindle has a knob on the inner side of the door only, so that the door can be opened from the outer side by the use of a key only.

8 is a dogging-slide guided in the lock-case and arranged to move to and fro.

8^a is a projection on the dogging-slide arranged when the slide is in one position to dead-lock the latch-bolt 3 (see Fig. 2) and when in another position to leave the said bolt free to be retracted. (See Fig. 1.)

9 is the tumbler, pivotally carried by the slide 8.

10 is a stop on the lock-case.

9^a is a stop-shoulder on the tumbler. When the stop-shoulder 9^a rests on that side of the stop 10 shown in Fig. 2, the dogging device is in engagement with the latch-bolt, and the same cannot be retracted or pushed back. When said stop-shoulder 9^a is on the opposite side of the said stop 10, as shown in Fig. 1, the dogging device is out of action and will not become accidentally displaced.

8^b and 8^c are shoulders on the dogging-slide, said shoulders being arranged on opposite sides of the end of the tumbler 9.

11 is a roll-back operated by a thumb-turn 11^a, arranged at the inner side of the door. Thus by rotating the thumb-turn 11^a the roll-back 11 will first engage and free the tumbler 9 and then by engagement with the shoulder 8^b will move the slide from the position shown in Fig. 1 to that shown in Fig. 2. When the thumb-turn is rotated in the reverse direction, the roll-back 11 will first free

the tumbler 8 and then by engagement with the shoulder 8^c move the slide from the position shown in Fig. 2 to that shown in Fig. 1. By this means the dogging device may be moved into and out of action.

12 is a lever pivotally carried by the slide 8. One end of this lever engages the latch-bolt 3, while the other end, (when the slide is in the position shown in Fig. 1) is within the range of action of a cam 13, operated by a key inserted in the lock 2 from the outer side of the door. When, however, the slide is in the position shown in Fig. 2, this end of the lever 12 will be out of the range of action of the cam 13. When the grand master-key is introduced in the lock 2 from the outside and turned, the cam 13 will on the first turn lift the tumbler 9 and then shift the slide 8 to the position shown in Fig. 1. A further partial turn will cause the cam 13 to lift the lever 12 and draw the bolt 3. Thus in all instances the lock may be operated from the outside by the use of a grand master-key, a feature of great value, particularly in the case of accident to the occupant of a room who has previously dead-locked the door and who needs assistance.

Now as to the use of the change-key and master-key. These keys are adapted to lock

1. When the room is empty, the parts stand as in Fig. 1. When in this state, the latch-bolt may be retracted by either of said keys.

14 is a lever pivoted at 14^a. One end of this lever is connected with slide 8, so that said lever will be rocked as said slide is moved to and fro. 14^b is a bell-crank lever pivoted to the lever 14. 14^c is a nose on 14^b, which nose bears against lever 7. 14^d is one arm of said bell-crank, which arm stands elevated or depressed according to the position of the dogging-slide 8. Now if a user of a room enters the same and dead-locks the slide he thereby sets the parts as shown in Fig. 2. The arm 14^d is thereby moved out of the range of action of cam 15 on lock 1. Hence at such times the latch-bolt 3 cannot be retracted by any key inserted in said lock. At such a time only the holder of a grand master-key can get in. Such a key, as above described, is adapted to lock 2 and by the use of same the dogging-slide may be first retracted and then the latch-bolt.

What is claimed is—

1. In a lock, a latch-bolt, a dead-locking device, means to actuate said dead-locking device from the inner side of the lock, means independent of the first and outside of the lock to actuate said dead-locking device and retract the bolt, and additional and independent means for retracting the bolt from

the outside of the lock, said latter means being incapable of actuating the dead-locking device.

2. In a lock, a latch-bolt, a dead-locking device, means to actuate said dead-locking device from the inner side of the lock, means independent of the first and outside of the lock to actuate said dead-locking device and retract the bolt, additional and independent means for retracting the bolt from the outside of the lock, said latter means being incapable of actuating the dead-locking device, and a knob-controlled spindle for retracting the latch-bolt independently of either of the first-mentioned means.

3. In a lock, a latch-bolt, a dead-lock therefor, means to actuate said dead-lock from the inside of a door, and two independent key-controlled means for actuating the latch-bolt from the outside of the door, one of said key-controlled means coöperating with the dead-lock whereby the latter may be cast off preparatory to retracting the latch-bolt by the said means.

4. In a lock, a latch-bolt, a dead-lock therefor, means to actuate said dead-lock from the inside of a door, two independent key-controlled means for actuating the latch-bolt from the outside of the door, one of said key-controlled means coöperating with the dead-lock whereby the latter may be retracted preparatory to retracting the latch-bolt by the same means, and a knob-controlled spindle accessible from one side of the door and operatively connected with the latch-bolt.

5. In a lock, a latch-bolt, a knob-spindle operatively connected with the latch-bolt, a dead-locking device for said bolt, means at the inside of the door for operating the same, and two independently-key-controlled means on the outside of the door for operating said latch, one of said last-mentioned means also operating the dead-locking device.

6. In a lock, a latch-bolt, a dead-lock therefor, means for operating said dead-lock from the inside of the door and including a roll-back operable from the outer side of the door only for operating said dead-lock, said means being operatively connected with said latch-bolt when the dead-lock is "off," and additional and independent means externally of the door for retracting the latch, including key-controlled mechanism disconnected from the latch when the dead-lock is "on."

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Witnesses:

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