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PATENTED NOV. 20, 1906.

H. G. VOIGHT.
LOCK AND LATCH MECHANISM.
APPLICATION FILED MAR. 17, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

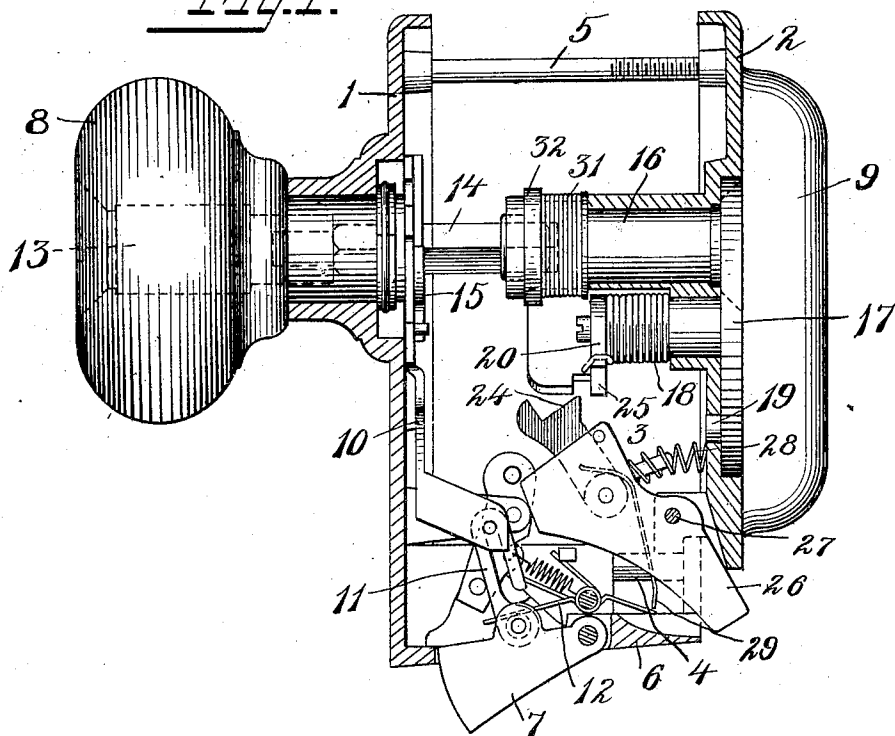
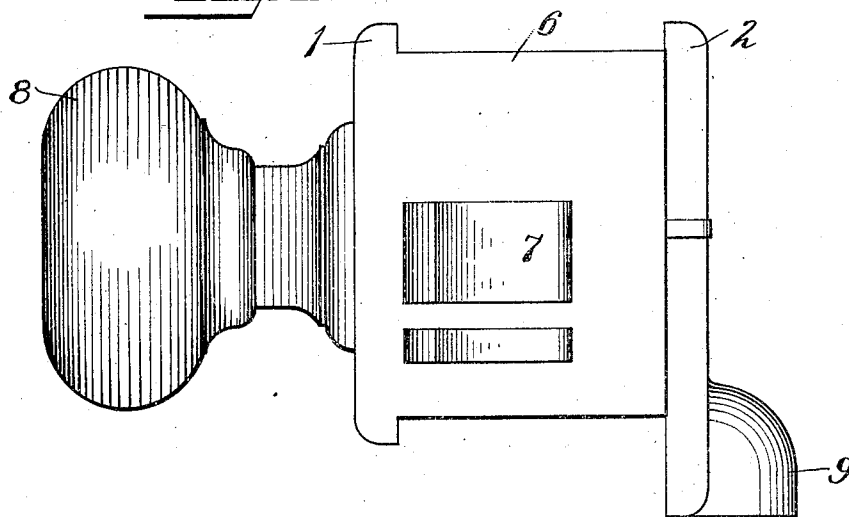


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

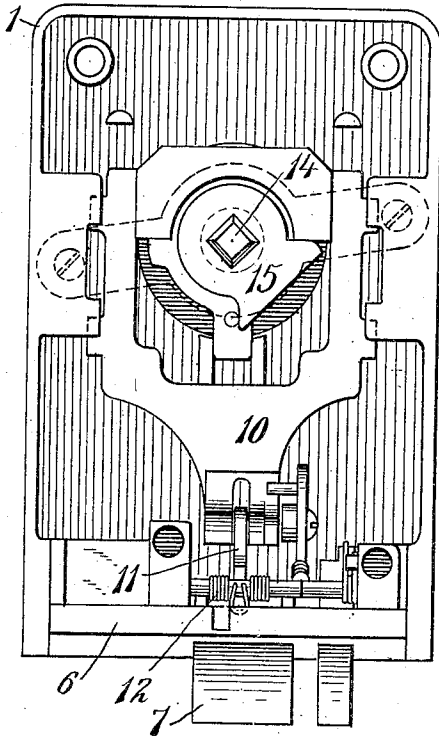


Fig. 4.

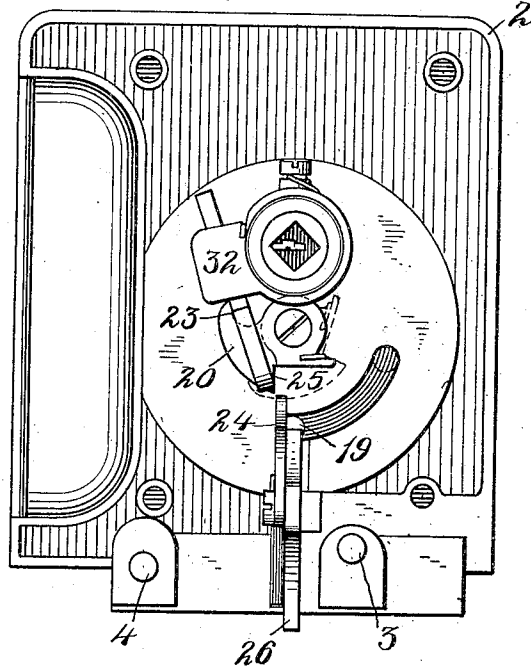
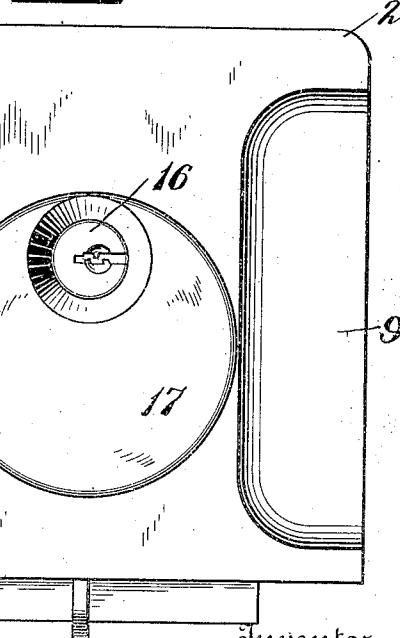
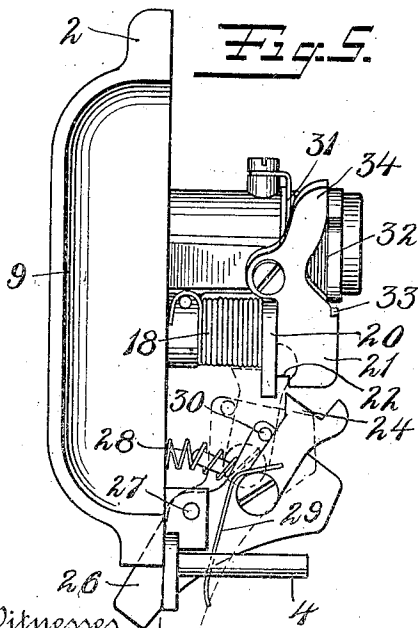


Fig. 5.



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LOCK AND LATCH MECHANISM.

No. 836,289.

Specification of Letters Patent.

Patented Nov. 20, 1906.

Application filed March 17, 1906. Serial No. 306,542.

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 Lock and Latch Mechanism, of which the following is a full, clear, and exact description.

My invention relates to improvements in lock and latch mechanism, and particularly to the type set forth in application Serial No. 279,397, filed September 21, 1905, by C. J. Caley and myself.

This mechanism is designed for use on the doors of cells or rooms in asylums. The door is normally locked and no means provided for opening it from the interior. The attendant desiring to enter the room retracts the spring-pressed latch-bolt by means of a key and opens the door. The act of retraction of the bolt also retracts a guard or shutter on the inner side of the lock, which uncovers means operable from the inner side for retracting the latch-bolt. When the door is closed, the latch-bolt springs out into the recess into the striker-plate and the inner operating mechanism is left exposed, so that the attendant may insert the key for the purpose of retracting the latch-bolt when it is desired to leave the room. In the mechanism of the application above referred to it is possible to reset the guard while the door is closed and shut off access to the operating mechanism. This would prevent the attendant from leaving the room. To avoid this difficulty and prevent tampering with the guard by the occupant of the room when the guard exposes the operating means, I have provided a stop or dogging device which operates to hold the guard stationary when the door has been closed by the attendant passing within.

The two accompanying sheets of drawings illustrate mechanism embodying the principles of my invention.

Figure 1 is a horizontal section and plan view of the mechanism involving my invention. Fig. 2 is an end elevation of the mechanism. Fig. 3 shows the latch-bolt and retracting mechanism attached to the interior of the outer side plate. Fig. 4 shows the interior of the inner side plate with the guard operating and dogging mechanism. Fig. 5

is a view of the inner side plate and attached mechanism. Fig. 6 is an exterior view of the inner side plate.

The parts are shown in the drawings in the position which they would occupy if the mechanism were attached to a door, the bolt retracted, and the door left standing open. The inner operating member for the latch-retracting mechanism is thus exposed and the guard device left in its released position.

The type of mechanism to which the invention is particularly adapted is constructed with a view to attachment to a door having a notch cut for the reception of parts of the mechanism.

The plates 1 and 2 are adapted to the opposite sides of the door and are properly alined by means of the pins 3 and 4. Suitable screws may be provided for clamping the plates to the door—as, for instance, the screw 5. One of the plates, preferably the outer plate 1, has an extension 6, forming an end plate adapted to extend across the edge of the door. The latch-bolt 7 is pivotally carried by this end portion and extends through an opening therein in the customary manner.

8 is the knob carried by the outer plate, and 9 is a grip-like handle provided on the lower edge of the inner plate 2. The outer knob is preferably fixed or non-rotatable.

10 is the latch-slide carried by the outer plate, which is connected by link 11 to the rear of the bolt 7.

12 is a spring normally holding the bolt in its extended position.

13 indicates a cylinder-lock mechanism located in the outer knob.

14 is a spindle which has a limited rotative movement relative to the plug of the cylinder-lock, so that the spindle may be partially rotated by operation from the inner side of the lock when the cylinder-plug is stationary.

15 is a roll-back carried by the spindle 14 and adapted to coact with the latch-slide 10 for retracting the latch-bolt when the spindle 14 is rotated.

16 is a hub carried by the inner side plate 2 and corresponding to the usual plug of the cylinder-lock. The spindle 14 fits in the outer end of this hub and may be rotated thereby upon the insertion of a key or other

instrument from the interior of the room when the parts are in the position shown in the drawings.

17 is a guard plate or shutter rotatably carried by the inner side plate and provided with an opening for access to the hub 16.

18 is a spring tending to rotate the shutter and hold it with the stop-pin 19 at the end of the curved slot in the back of the inner side plate, as shown in Fig. 4.

20 is an arm carried by the shaft of the guard 17 and rotatable therewith.

21 is a pivoted latch which rests against the face of the arm 20 in the position shown in the drawings. This latch has a shoulder 22 adapted to coact with the shoulder 23 of the arm 20 and hold the arm and guard in the closed position. (Shown dotted in Fig. 4.) It is to prevent this closing of the shutter when the door is in the closed position that I have provided the improvements of this application.

24 is a dog adapted to be introduced beneath the shoulder 25 of the arm 20.

26 is a lever pivoted at 27 and pressed outward by the spring 28 into the position shown in Fig. 1 when the door is open. The dog 24 is pivoted to the lever 26 and pressed by the spring 29 against the stop 30 on the lever.

When the door to which the mechanism is attached is closed, the operating-lever 26 strikes against the door frame or casing and is tilted into the position shown in dotted lines in Fig. 5. In this position the dog 24 engages the shoulder 25 of the arm 20 and prevents the closing of the guard so long as the door remains closed. When the door is opened, the operator 26 is moved to the position shown in full lines, and the dog 24 is thrown out of engagement with the guard-arm by the action of the spring 28.

The rotation of the hub 16 for the purpose of retracting the latch-bolt is opposed by the spring 31, so that when the latch-bolt has been retracted, the door opened, and the key removed the spring rotates the hub automatically to its proper position.

32 is an arm or roll-back carried by the hub 16 and having a limited rotative movement relative thereto, as shown in the former application. One end of the spring 31 engages this roll-back 32 and tends to rotate it and move it toward engagement with the shoulder 33 on the latch 21. When the attendant wishes to pass out, he manually rotates the guard 17 toward its closed position, and the pressure of the roll-back 32 against the incline of the latch 21 moves the latch so that the shoulder 22 is interposed beneath the shoulder 23 of the guard-arm 20, thus locking the guard in its closed position. When the door is again closed as the attendant passes out, the striking of the operator 26 against the door-casing brings the dog down and on top of the guard-arm 20; but since the dog is

pivoted to the operating-lever this action is permitted.

When the door has been closed from the exterior, the latch-bolt may be retracted by the operation of a key in the cylinder-lock 13. Rotation of the spindle 14 by this means rotates the hub 16 and roll-back 32. The roll-back then engages the tail 34 of the latch 21 and swings the latch out of engagement with the guard-arm 20. The guard-spring 18 then throws the guard into the open position, as shown in the drawings.

What I claim is—

1. In a latch mechanism, a bolt, means for retracting the bolt including an actuating member accessible from one side of the mechanism, a guard independent of the bolt normally preventing access, means for opening the guard, and means for preventing the guard from being closed when the door to which the mechanism is attached is closed.

2. In a lock and latch mechanism, a latch-bolt, means at one side of the mechanism for retracting said bolt, a rotatable hub accessible from the opposite side of the mechanism and connected to the latch-retracting means, a roll-back rotatable by said hub, a guard for preventing access to said hub, an arm movable with said guard, and a latch member operable by said roll-back for engaging said arm and holding said guard in its closed position.

3. In a latch mechanism, a latch-bolt, an actuating member accessible from one side of the mechanism, operable means of connection between said actuating member and said latch-bolt, a guard normally preventing access to said actuating member, means for opening said guard, and automatically-operable means for preventing the closing of said guard.

4. In a latch mechanism, a latch-bolt, an actuating member accessible from one side of the mechanism, operable means of connection between said actuating member and said latch-bolt, a guard independent of the bolt normally preventing access to said actuating member, means for opening said guard, and means for preventing the closing of said guard.

5. In a latch mechanism, a latch-bolt, an actuating member accessible from one side of the mechanism, operable means of connection between said actuating member and said latch-bolt, a guard normally preventing access to said actuating member, means for opening said guard, and pivoted means for preventing the closing of said guard.

6. In a latch mechanism, a latch-bolt, an actuating member accessible from one side of the mechanism, operable means of connection between said actuating member and said latch-bolt, a guard normally preventing access to said actuating member, means for opening said guard, and pivoted spring-

pressed means for preventing the closing of said guard.

7. In a latch mechanism, a latch-bolt, an actuating member accessible from one side of the mechanism, operable means of connection between said actuating member and said latch-bolt, a guard normally preventing access to said actuating member, means for opening said guard, and means for preventing the closing of said guard, including an operating member extending from the edge of the mechanism.

8. In a latch mechanism, a latch-bolt, an actuating member, means of connection between said actuating member and said latch-bolt, a guard for preventing access to said actuating member, a latch operable by said actuating member for holding the guard in its closed position, and a dogging device for holding the guard in its open position.

9. In a latch mechanism, a bolt, an actuating member, means of connection between said actuating member and said bolt, a guard for preventing access to said actuating member, an arm rotatable with said guard, a latch for said arm, a roll-back carried by said actuating member, and a spring holding said roll-back in yielding engagement with said latch.

10. In a latch mechanism, a bolt, an actuating member, means of connection between said actuating member and said bolt, a

spring-pressed guard, an arm rotatable therewith, a roll-back operable by said actuating member, a pivoted latch member having a portion adapted to engage said arm and another portion adapted to be engaged by said roll-back for releasing said latch from said arm.

11. In a latch mechanism, plates adapted to the opposite sides of a door, a latch-bolt carried by an extension from the outer plate, a latch-slide carried by said outer plate, means accessible from the outer side of the lock for retracting said slide, an actuating member accessible from the inner side of the lock for retracting said slide, a guard for preventing access to said actuating member, means for opening said guard, and means for locking said guard in its open position when the door to which the mechanism is attached is closed.

12. In a door-lock, bolt-actuating mechanism, a guard therefor, means for opening the guard, means for holding the guard "open" while the door is closed said means permitting the guard to be released when the door is open and means for holding the guard closed.

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Witnesses:

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