No. 753,783. PATENTED MAR. 1, 1904.

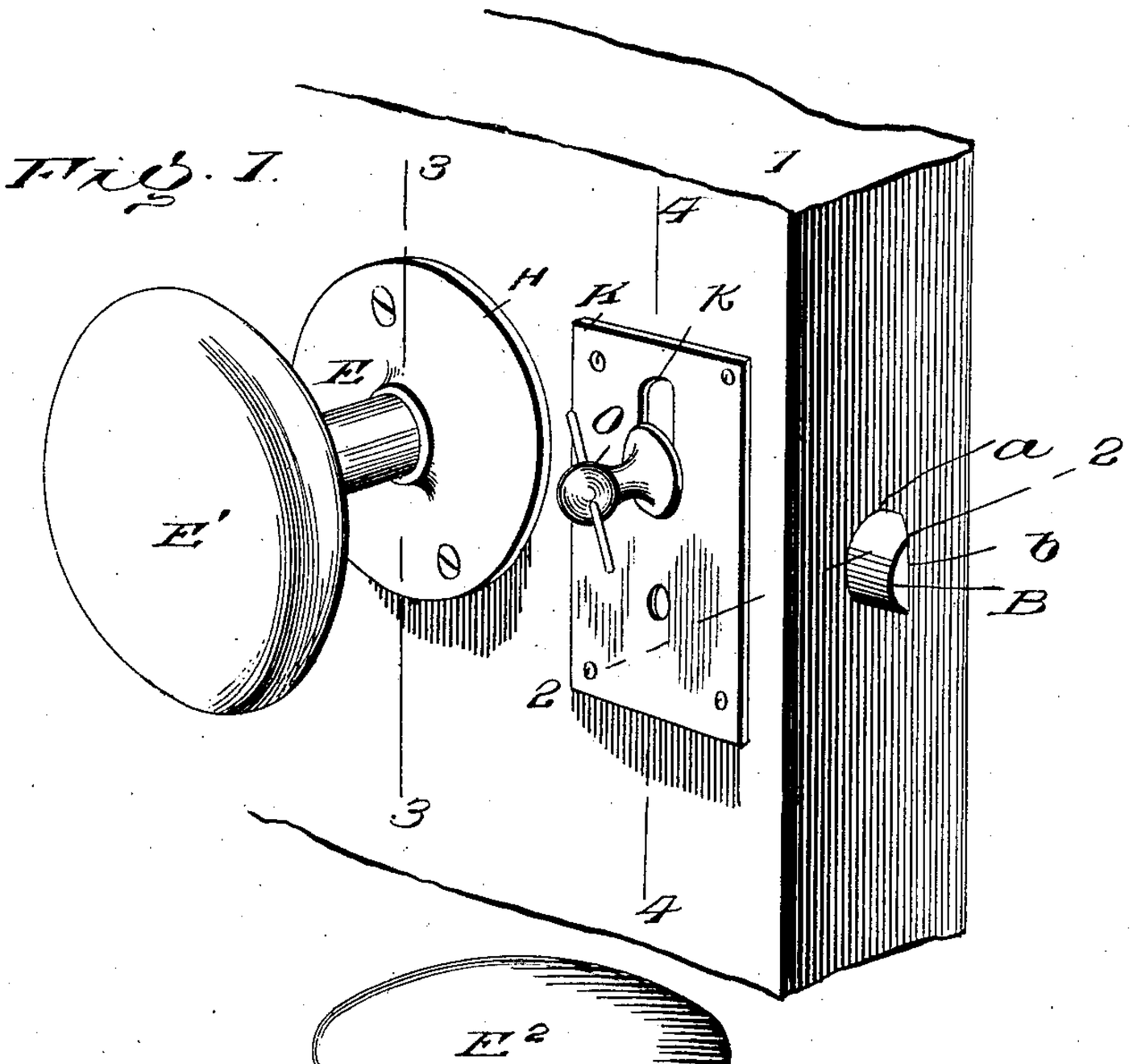
J. E. YOUNG.

COMBINED LOCK AND LATCH.

APPLICATION FILED MAR. 17, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

FIG. 1.



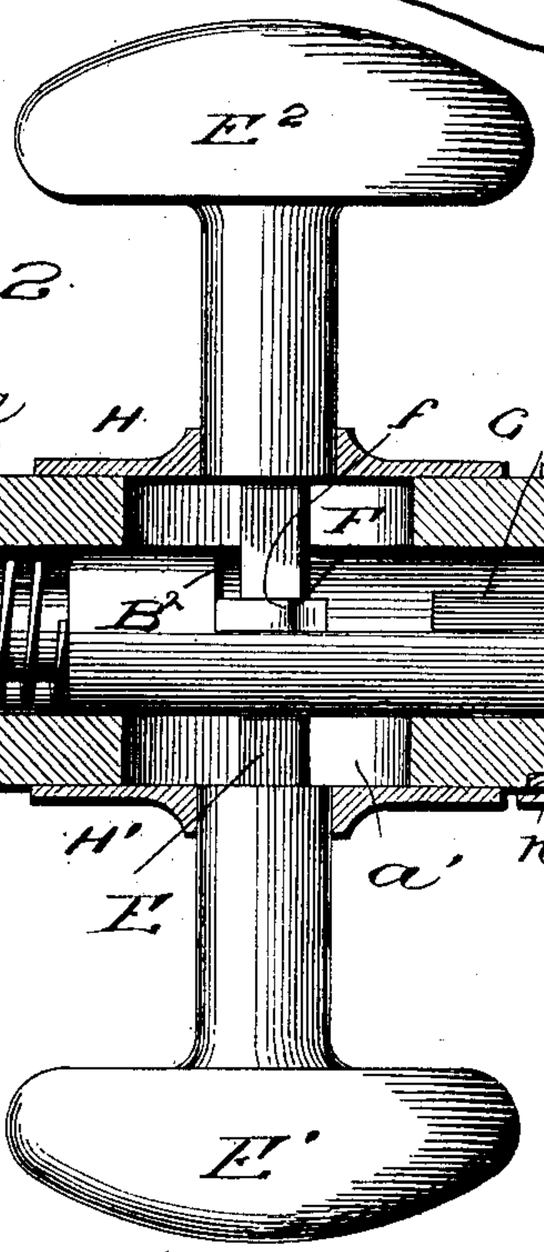


FIG. 2.

Witnesses

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NO MODEL. 2 SHEETS—SHEET 2

Fig. 3.

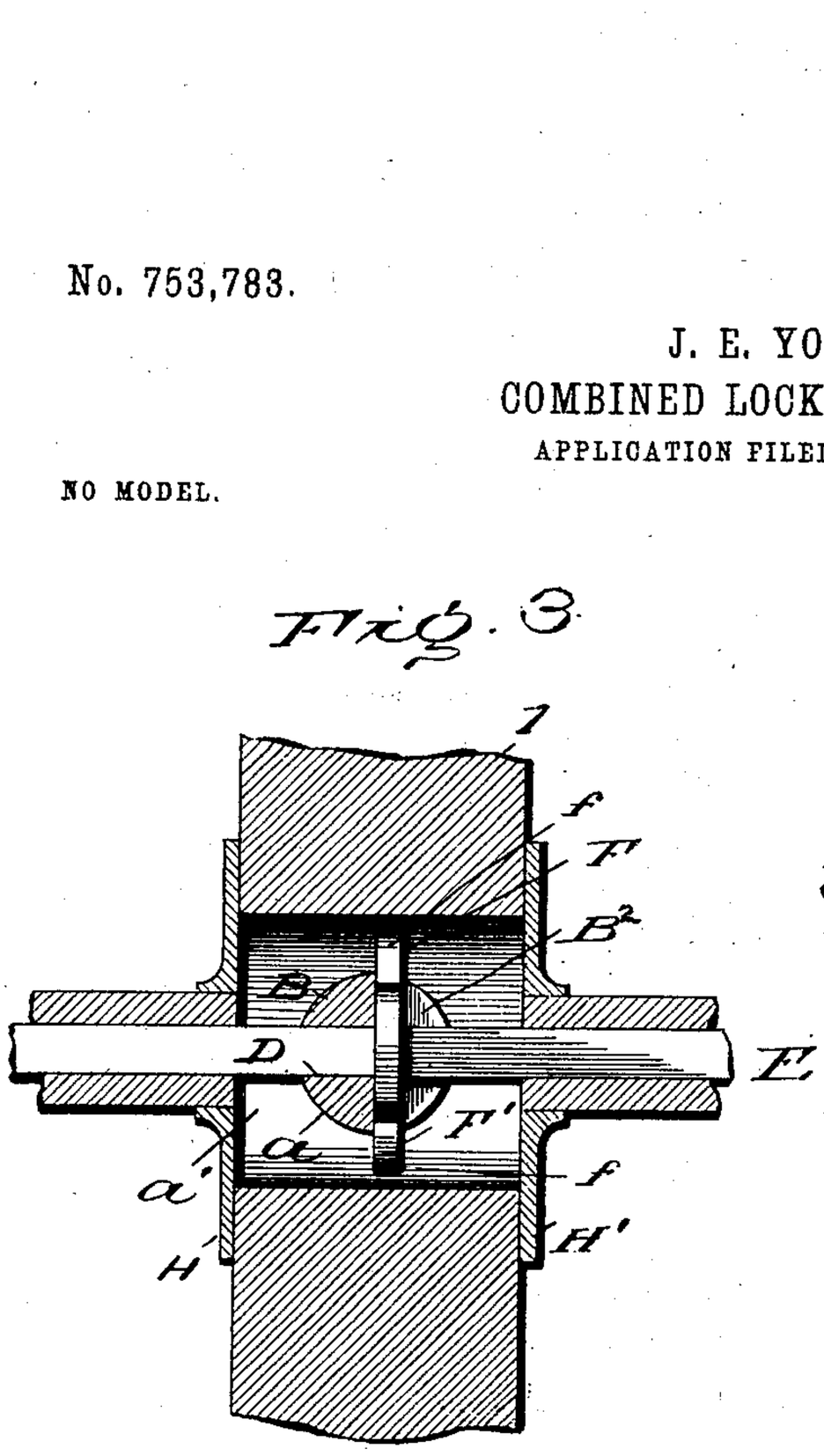


Fig. 6.

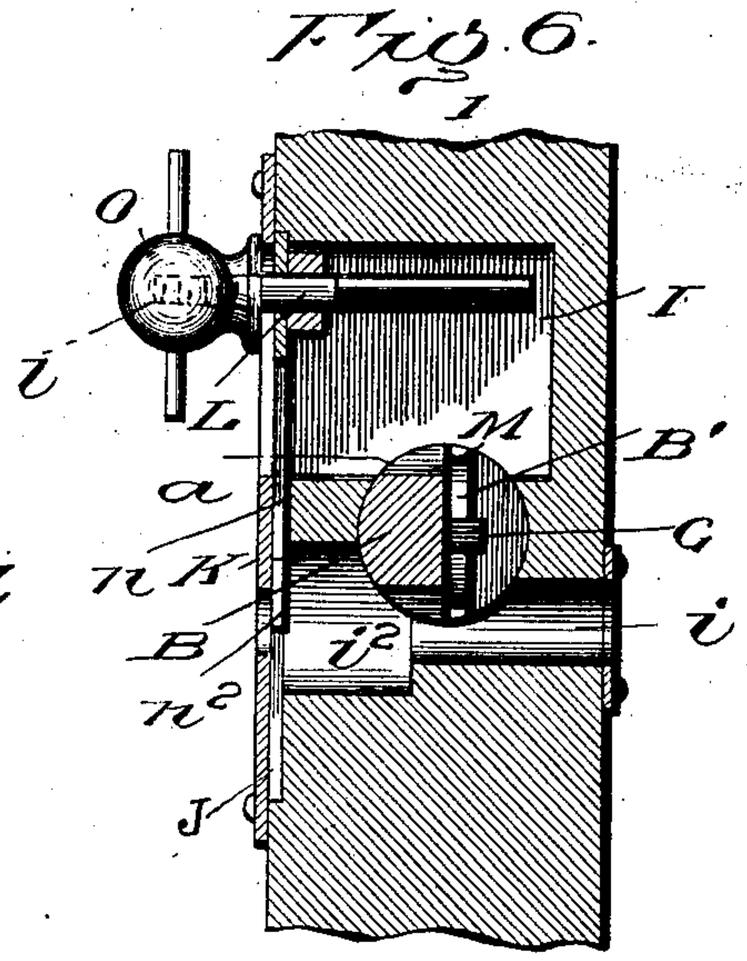


Fig. 4.

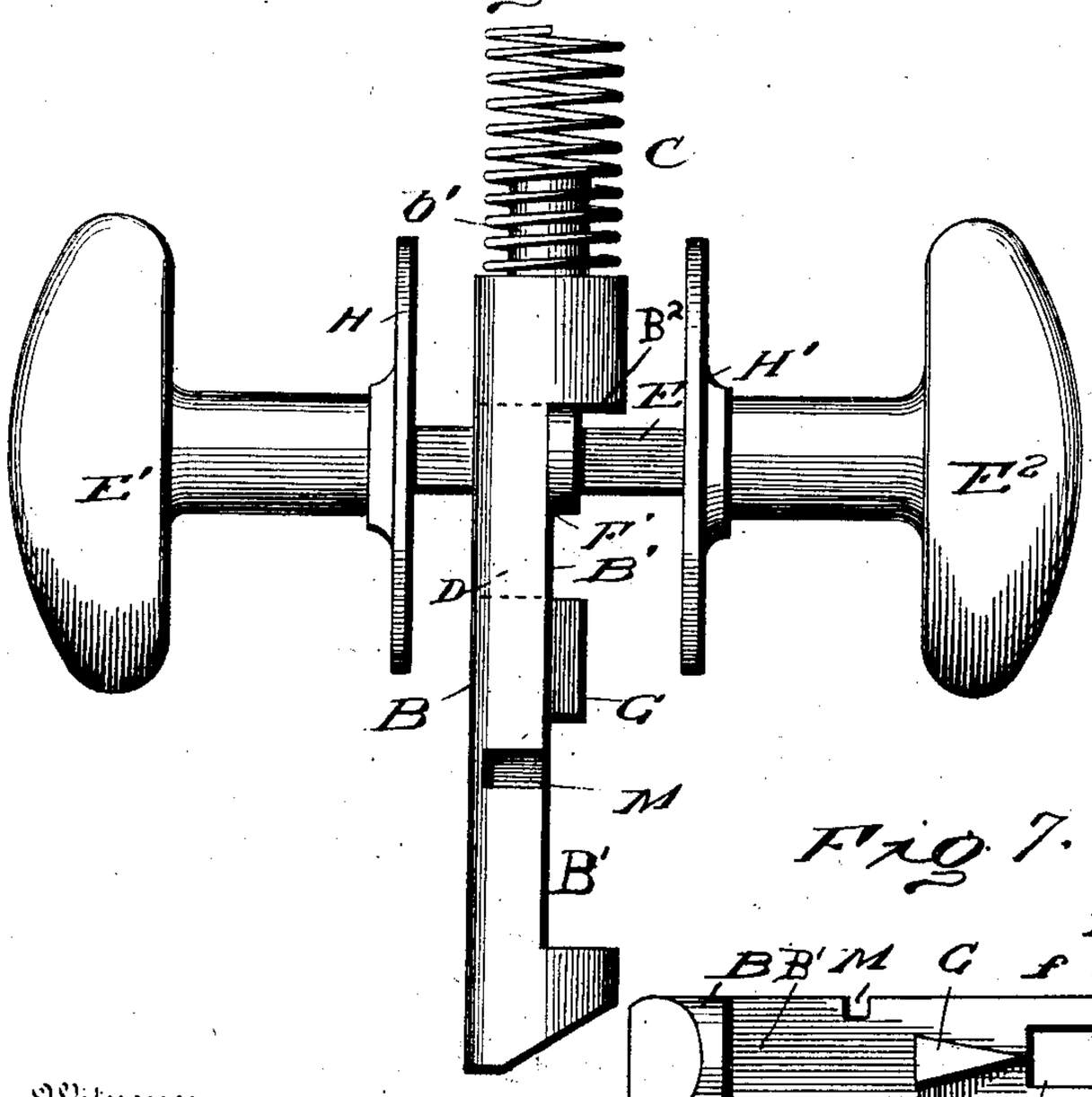


Fig. 5.

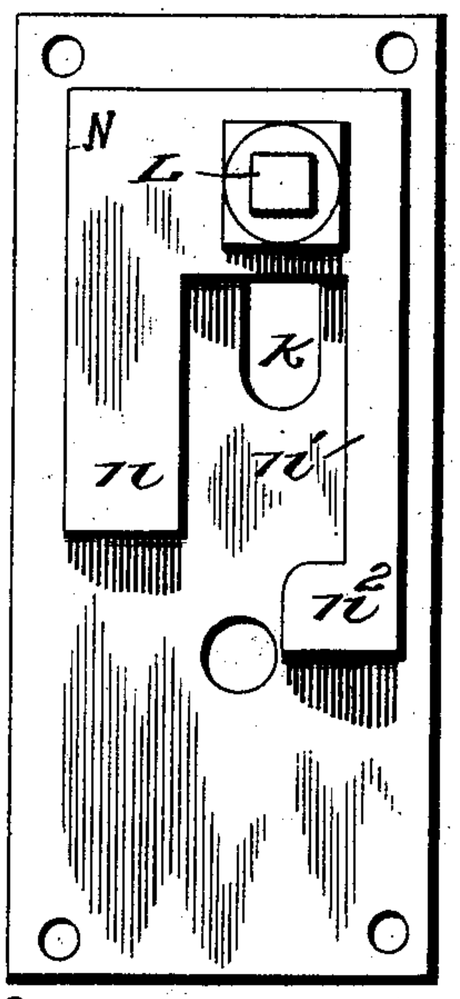
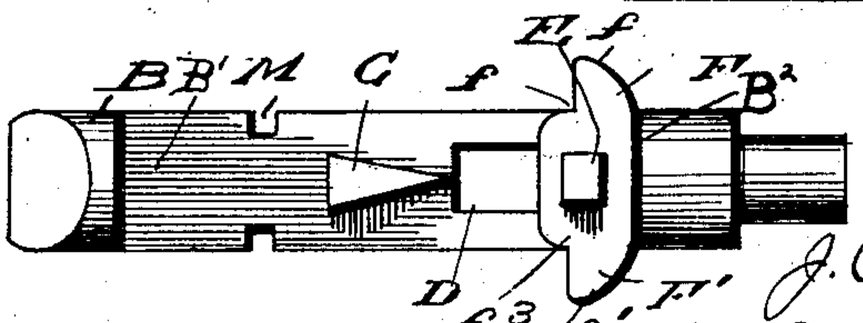


Fig. 7.



Witnesses

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No. 753,783. Patented March 1, 1904.

UNITED STATES PATENT OFFICE.

JAMES E. YOUNG, OF WAYLAND, NEW YORK.

COMBINED LOCK AND LATCH.

SPECIFICATION forming part of Letters Patent No. 753,783, dated March 1, 1904.

Application filed March 17, 1903. Serial No. 148,222. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. YOUNG, a citizen of the United States, residing at Wayland, in the county of Steuben and State of New York, have invented new and useful Improvements in a Combined Lock and Latch, of which the following is a specification.

My invention relates to improvements in combined locks and latches, and pertains more particularly to that class including a night-latch.

The object of my invention is to provide a combined lock and latch which can be used as an ordinary latch operated by a knob and is provided with means for locking the same in an outward position, and thus serves as a positive lock for the door. The said latch-locking mechanism is adapted to be locked in or out of engagement with the latch from the inside or may be held in such a position that the normal tendency thereof would be to hold the latch in an outward position, but said mechanism when in such a position being adapted to be operated by a key from the outside of the door.

Another object of my invention is to provide a combined lock and latch of this character which can be readily attached to the ordinary door and which is more simple, cheap, and durable than locks of this character heretofore produced.

In the accompanying drawings, Figure 1 is a perspective view of a portion of the door, showing my combined lock and latch attached thereto. Fig. 2 is a horizontal sectional view taken on line 2 2 of Fig. 1. Fig. 3 is a vertical sectional view taken on line 3 3 of Fig. 1. Fig. 4 is a top plan view of the sliding bolt and the knob's operating mechanism. Fig. 5 is an enlarged plan view of the mechanism operated by the key by means of which the latch-locking mechanism is released. Fig. 6 is a vertical sectional view taken on line 4 4 of Fig. 1. Fig. 7 is an enlarged side elevation of the sliding bolt and operating mechanism.

Referring now to the drawings, A represents that portion of the door to which locks of this character are attached, and the edge thereof is provided with a horizontal round elongated recess *a*, into which fits the sliding latch B, which is of a corresponding shape, although this forms no part of my invention, as said recess *a* could be square and the latch or bolt of a corresponding shape. The said latch or bolt B is of a length less than that of the recess *a* and has its outer end beveled at *b* and the inner end reduced at *b'*, and said reduced portion is adapted to enter a coiled spring C, which is located at the inner end of the recess *a*. The normal tendency of said spring is to hold the said latch in an outward position, and thus serves as a latch for holding the door closed. The said sliding latch or bolt B is provided with a vertical cut-away portion B' between its ends and is also provided with an elongated horizontal transverse slot D adjacent the rear end thereof and through which the knob-spindle E is adapted to pass, thus allowing for the free inward movement of the sliding latch or bolt B. The said knob-spindle E carries the usual knobs E' and E^2 by means of which the sliding bolt or latch B is drawn inwardly, which I will now proceed to describe. The said bolt or latch B, having cut-away portions B' adjacent the rear end, forms a vertical shoulder or ledge B^2 and the knob-spindle E is provided intermediate its ends with laterally-extending oppositely-arranged wings F and F', which have their rear edges beveled at *f* and *f'*, and said beveled portions of said wings are adapted to engage the shoulder B^2, and thus the turning of the knob-spindle E through the medium of the knobs E' and E^2 in either direction will cause the latch or sliding bolt B to be drawn inwardly against the tension of the spring. To prevent the knob-spindle from being turned too far in either direction, I provide the wings F and F' with notches or recesses f^2 and f^3, which are adapted to engage the upper and lower portions, respectively, of the lug G, carried by the said sliding bolt or latch B. The said lug G is so positioned on the member B that the turning of the knob-spindle, which throws the bolt rearwardly, will bring said

lug below or above the outer end of one of the wings F and F', according to the direction the knob is turned.

The door is provided with an enlarged transverse opening a', which allows of the free removal of the knob-spindle E, and thus the bolt B can be removed when desired. The end of said opening a' is covered by the circular plates H and H', which also form bearings for the said knob-spindle to turn in.

The door adjacent the edge and a little above the sliding bolt is provided with an elongated vertical recess I, which communicates with the upper portion of the recess a, and below said recess a is a second key-opening i, through which the key is adapted to be inserted, and the inner end is enlarged at i^2 for the purpose of allowing the enlarged end of the key to be turned after inserted, the purpose of which will be hereinafter fully described. The inside of the door is provided with a slight recess J, which is preferably of an elongated form and surrounds the two recesses I and i^2, and covering said recess is a plate K, which is preferably secured to the side of the door by screws, although any desired means might be used. The upper end of the plate K is provided with a vertical elongated slot k, and vertically adjustable in said slot k is a horizontally-arranged squared member L, which extends into the vertical cut-away portion or recess I in the door A. The said cut-away portion or recess I communicates with the horizontal recess a and is so positioned that when the bolt B is in its normal or outwardly-pressed position the notch or recess M in the bolt B is directly therebelow, and thus the member L is by gravity held therein or locked therein, as hereinafter more fully described. The bolt or squared member L on the inside of the plate K carries a plate N, which extends downwardly adjacent the key-opening and is thus adapted to be raised by the key, which in turn raises the bolt or squared member out of the recess in the sliding bolt B, and thus allows the same to be turned by the knob-spindle, as heretofore described. The said downwardly-extending member is preferably of the construction shown—that is, with two downwardly-extending arms n and n', the member n being shorter and broader than the member n', while the member n' is provided at its extreme lower end with a laterally-extending member n^2, and thus the key only acts when turned in one direction and that is on the lower end of the arm n'. The said squared member L on the outside of the plate K is screw-threaded at l, and fitting on said screw-threaded portion is a thumb-screw O, which is adapted to clamp the rod or member L in the slot of the plate K at the adjusted position, and the lock is made a positive lock, which can only be operated from the inside, or when the thumb-nut is left loose it can be raised by a key, heretofore described, or the member L can be locked in the upper part of the slot of the plate K, and thus the device is adapted to be used as a latch only.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A combined lock and latch comprising a sliding bolt having a notch in its upper face, a vertically-movable transverse member adapted to rest in said notch, a knob carried by said transverse member and adapted to lock said member in or out of engagement with said notch and means operated by a key for raising said transverse member out of engagement with said notch.

2. A combined lock and latch comprising a sliding bolt having a notch in its upper face, a vertically-movable transverse member adapted to rest in said notch, a knob carried by said transverse member and adapted to lock said member in or out of engagement with said notch, downwardly-extending arms carried by said transverse member and adapted to be raised by a key for raising said transverse member from the notch.

3. A combined lock and latch comprising a sliding latch normally outwardly spring-pressed and having a notch in its upper face, a vertically-movable transverse member adapted to rest in said notch, a knob carried by said transverse member and adapted to lock said member in or out of engagement with said notch, two downwardly-extending arms carried by said transverse member and one of said arms adapted to be engaged by a key for raising the said transverse member from the notch.

4. A combined lock and latch comprising a horizontal bolt having a reduced inner end, a coil-spring surrounding the same and normally holding the same outward, said bolt having an intermediate vertical cut-away portion forming an abrupt shoulder against the rear end and a horizontal elongated slot communicating with said cut-away portion, a laterally-extending horizontal lug intermediate the ends of said cut-away portion, a knob-spindle extending through said horizontal elongated slot, outwardly-extending oppositely-arranged wings having a beveled rear portion adapted to engage said shoulder and the forward portion of said wings adapted to engage said lug, and means for locking said bolt in an outward position.

5. A combined lock and latch comprising an outwardly spring-pressed bolt having a notch in its upper face, a stationary plate adjacent said bolt and having a vertical slot therein, a vertically-movable horizontal bolt adapted to rest in said notch, a plate carried by said bolt on the inside of said stationary plate, the outer end of said bolt outside of the stationary plate being screw-threaded, a thumb-screw

carried thereby, downwardly-extending arms carried by said plate carried by the transverse bolt, and a key adapted to engage one of said downwardly-extending arms whereby the transverse bolt is raised out of the notch.

6. A combined lock and latch comprising a sliding latch normally outwardly spring-pressed and having a notch in its upper face, a vertically-slidable member adapted to rest in said notch, a knob carried by said member and adapted to lock said member in or out of engagement with said notch, a downwardly-extending arm carried by said member and adapted to be raised by a key whereby the said member is raised from said notch.

7. A combined lock and latch comprising a sliding latch normally outwardly spring-pressed and having a notch in its upper face, a vertically-movable transverse member adapted to rest in said notch, a plate having a vertical slot through which said transverse member passes, downwardly-extending arms carried by said transverse member on the inside of said plate, and adapted to be raised by a key for raising said transverse member from the notch, a knob screwed upon said transverse member on the outside of said plate.

8. A combined lock and latch comprising a sliding latch, or bolt normally outwardly spring-pressed and having a notch in its upper face, a vertically-movable transverse bar adapted to rest in said notch, a plate having a vertical slot through which said transverse bar passes and the outer end of said bar being screw-threaded, two downwardly-extending arms carried by said bar on the inside of said plate, and one of said arms adapted to be engaged by a key for raising said transverse bar from the notch, and a knob screwed upon said bar on the outside of said plate, whereby the bar is positively locked in or out of said notch.

9. A combined lock and latch comprising a sliding bolt having a horizontal transverse slot therein, the said bolt having a vertical cut-away portion adjacent one side of said slot, a horizontal projection within said cut-away portion intermediate its ends, a spindle passing through said horizontal transverse slot, laterally-extending wings carried by said spindle, and having beveled portions adapted to engage the rear wall formed by the vertical cut-away portion, the upper portion of said sliding bolt carrying a transverse notch, a vertically-movable transverse member adapted to rest in said notch, a knob carried by said transverse member and adapted to lock said member in or out of engagement with said notch, and means operated by a key for raising said transverse member out of engagement with said notch.

10. A combined lock and latch comprising a sliding bolt having a vertical cut-away portion forming a shoulder adjacent its rear end, and a horizontal slot in communication with said cut-away portion, a transverse turning bolt passing through said slot, outwardly-extending wings carried by said bolt and adapted to engage said shoulder, said bolt having a transverse notch in its upper face, a transverse vertically-movable bar adapted to rest in said notch, means for positively locking said bar in said notch from the inside, and means for raising said bar out of said notch by a key from the outside.

11. A combined lock and latch comprising a sliding bolt having a vertically cut-away portion forming a shoulder adjacent its rear end and a horizontal slot in communication with said cut-away portion, a transverse turning bolt passing through said slot, laterally-extending wings carried by said bolt and adapted to engage said shoulder, a stop carried by said slide-bolt for limiting the oscillation of said turning bolt, said sliding bolt having a transverse notch in its upper face, a transverse vertically-movable bar adapted to rest in said notch, means for locking said transverse bar in said notch, and means for locking said transverse bar out of said notch.

12. A combined lock and latch comprising a sliding bolt having a vertical cut-away portion forming a shoulder adjacent its rear end, and a horizontal slot communicating with said cut-away portion, a transverse turning bolt passing loosely through said slot, wings carried by said bolt, and adapted to engage the shoulder carried by said sliding bolt, the upper face of said sliding bolt having a transverse notch therein, a vertically-movable transverse member adapted to rest in said notch, a knob carried by said transverse member and adapted to lock said member in or out of engagement with said notch, two downwardly-extending arms carried by said transverse member and one of said arms adapted to be engaged by a key for raising the said transverse member out of the notch.

13. A combined lock and latch comprising a sliding bolt normally outwardly spring-pressed, a knob adapted to move said bolt inwardly against the spring, said bolt having a notch in its upper face, a transverse vertically-movable bar normally held in said notch by gravity, means for locking said bar in or out of engagement with said knob, and means for raising said bar out of said notch from the outside.

14. A combined lock and latch comprising a sliding bolt having a vertical cut-away portion forming a shoulder adjacent its rear end, and a horizontal slot communicating with said cut-away portion, a transverse spindle passing loosely through said slot, wings carried by said bolt and adapted to engage the shoulder carried by said sliding bolt, the upper face of said sliding bolt having a squared transverse notch therein, a vertically-movable transverse squared member adapted to rest in said notch

in said sliding bolt, two downwardly-extending members carried by said transverse member, and one of said arms adapted to be engaged by a key, whereby the said transverse member is raised out of said notch, the outer end of said transverse member passing through an elongated slot in a plate carried by the door, and having its end screw-threaded, and a thumb-nut on said screw-threaded end, whereby the said transverse member is clamped in the desired position to the plate carried by the door.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JAMES E. YOUNG.

Witnesses:
P. H. ZIMMERMAN,
L. D. CARPENTER.