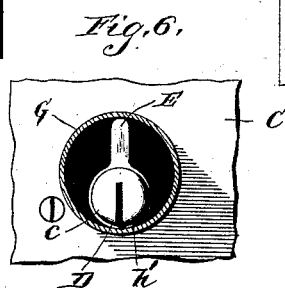
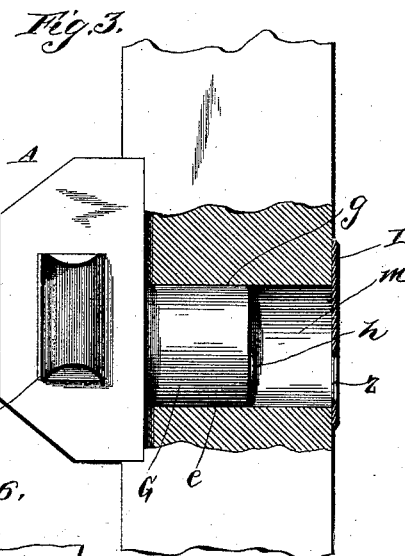
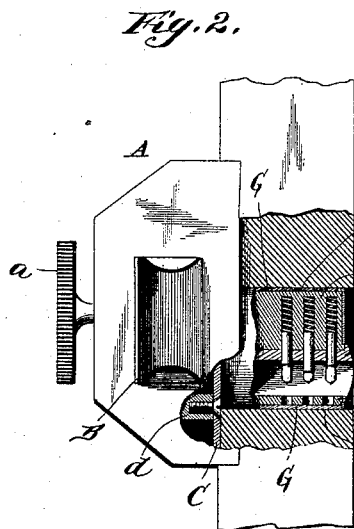
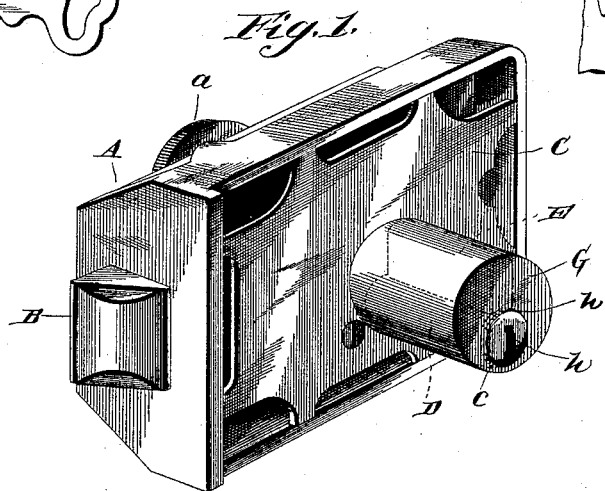
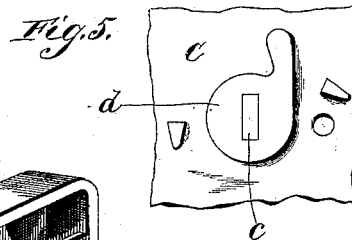
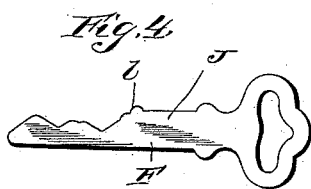


(Model.)

J. SCHADE & F. B. CASE.
LOCK.

No. 419,890.

Patented Jan. 21, 1890.



Witnesses
Mary Brough
Villette Anderson,

Inventors
John Schade
Frank B. Case
E. W. Anderson
Atty.

UNITED STATES PATENT OFFICE.

JOHN SCHADE AND FRANK BELL CASE, OF BROOKLYN, NEW YORK.

LOCK.

SPECIFICATION forming part of Letters Patent No. 419,890, dated January 21, 1890.

Application filed February 27, 1889. Serial No. 301,386. (Model.)

To all whom it may concern:

Be it known that we, JOHN SCHADE and FRANK BELL CASE, citizens of the United States, and residents of Brooklyn, in the
5 county of Kings and State of New York, have invented certain new and useful Improvements in Locks; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

15 Figure 1 of the drawings is a representation of a perspective view of a lock illustrating our invention. Fig. 2 is a sectional view of the same in position in a thin door. Fig. 3 is a sectional view showing the lock attached to a thick door. Fig. 4 is a view of the key. Figs. 5 and 6 are details.

This invention has relation to door-locks wherein the latch-bolt is designed to be operated from the outside of the door by means
25 of a notched key working in a cylindrical lock provided with pin-tumblers; and the invention consists in the novel construction and combination of devices, all as hereinafter set forth.

30 In the accompanying drawings, the letter A designates the lock-case, and B the latch-bolt therein, having lugs to engage the usual yoke-lever pivoted in the main wall A, and having the knob *a*, whereby it is operated
35 from the inside of the door.

C is the cap of the lock-case, which is secured thereto by a screw passing into the spring-stud *d'*. The cap C is provided with the hollow cylindrical bearing-lug D for the
40 key-plug, said lug having the hollow offset rib or pin-chamber E, the pin-bearings of which communicate with the chamber within the cylindrical lug D, the latter chamber receiving the key-plug *c*, the outer end of which
45 is flanged to form a head *h*, extending over the end of the lug D. To the inner end of the key-plug is secured the cam-lug *d*, which is designed to engage a shoulder of the latch-bolt and draw said bolt when the key-plug is
50 rotated. In the pin-chamber are the usual pin tumblers and drivers, which, when the key is out of the slotted key-plug *c*, engage

the latter and prevent it from turning by holding it in rigid relation to the wall of the pin-chamber. Therefore said key-plug is
55 locked immediately to the bearing-lug D of the cap, the pin-drivers engaging the pin-chambers by their outer ends and the key-plug by their inner ends. The bearing-lug D and its offset rib or pin chambers E are integral with the cap C and project therefrom
60 at right angles in such a manner that when the latch is applied to a door through which a cylindrical opening has been bored, as at *e*, the lug portion will enter the opening, which
65 forms a passage through which the key F may be inserted from the outside.

Heretofore it has been the practice in pin-tumbler latch-locks to have a separate escutcheon, which, having its outer end flush
70 with the door-surface, has been designed to reach into the bore in the door and has been secured to the cap of the lock by screws reaching through the cap into ear-lugs of this escutcheon, the connection between the key-
75 plug and the mechanism in the lock having been made by a separate connecting-bar, which has had to be cut off to suit varying thicknesses of doors.

In our invention we cast the pin-chamber 80 and lug bearing on the cap, which is a plain plate and separable from the lock-case, and we have a much simpler and cheaper method of construction, and provide that in case of injury to the pin-chamber and lug-bearing
85 the simple cap-plate and its lug will only have to be replaced.

We are aware that there have been draw-locks in which the pin-chambers and bearing-lug have been made integral with the case of
90 the lock, but such parts have never been made integral with the cap-plate.

In order to guard the lug and pin-chamber and facilitate its application to the bored opening, so that the key-plug will be in true
95 position, as well as to guard the opening at the side of the lug, a cylindrical cap-sleeve or thimble G is fitted thereon, said thimble having its outer end or escutcheon end G' made integral with its cylindrical wall and
100 provided with the eccentric opening *h'*, adapted to receive the end *h* of the key-plug *c* when the escutcheon-thimble is applied to the lug, as indicated in the drawings.

We are aware that a cylinder-band not having an integral escutcheon end has been made, and we do not claim such construction.

As the lug projection of the cap is designed to be made of uniform size in these latch-locks, it is apparent that in order to accommodate thin doors these lugs must be short, so that they will not project on the outside of the door. When, therefore, these latch-locks are applied to thicker doors, the lug projections will not extend to the outer surface of the door, but there will be between the end of the lug projection and said outer surface an interval, as at *m*, which may be of considerable extent. In order to guard this interval, and at the same time to provide a neat finish on the outer surface of the door, an independent escutcheon-plate *L* may be secured to the door at the outer end of the opening or passage *e*. This escutcheon-plate is provided with an eccentric opening *z*, through which the key is thrust to engage the slotted key-plug of the lock. The key *F* is therefore made with an extension *J* of its shank between its bow or handle and the stop-shoulder at the end of its notched portion, said extension being of sufficient length to accommodate the key to the varying thickness of doors. In order that the key may be stopped at the proper point in the key-plug, which cannot be seen in the dark passage be-

hind the escutcheon-plate, it is provided with the stop-shoulder *l*, above referred to, at the commencement of the extended portion of the shank.

What we claim, and desire to secure by Letters Patent, is—

1. In a pin-tumbler lock, the cap-plate of the lock having integral therewith the cylinder bearing-lug *D* for the key-plug and the offset pin-chamber *E*, integral with said bearing-lug and cap, substantially as specified.

2. In a latch-lock, the combination, with the cap-plate, its cylindrical bearing-lug for the key-plug, and the offset pin-chamber, of the thimble *C*, having its integral escutcheon end provided with the eccentric opening to engage the end of the bearing-lug for said key-plug, substantially as specified.

3. The combination, with a pin-tumbler lock having chambered lugs projecting from its cap-plate and the tumbler mechanism therein, of the shank-extended key having the shank-extension *J* between its bar and the stop-shoulder, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN SCHADE.

FRANK BELL CASE.

Witnesses:

JOSEPH H. HALL,
EGBERT S. MOTT.