

(No Model.)

F. W. SCHULTZE.
PADLOCK.

No. 486,685.

Patented Nov. 22, 1892.

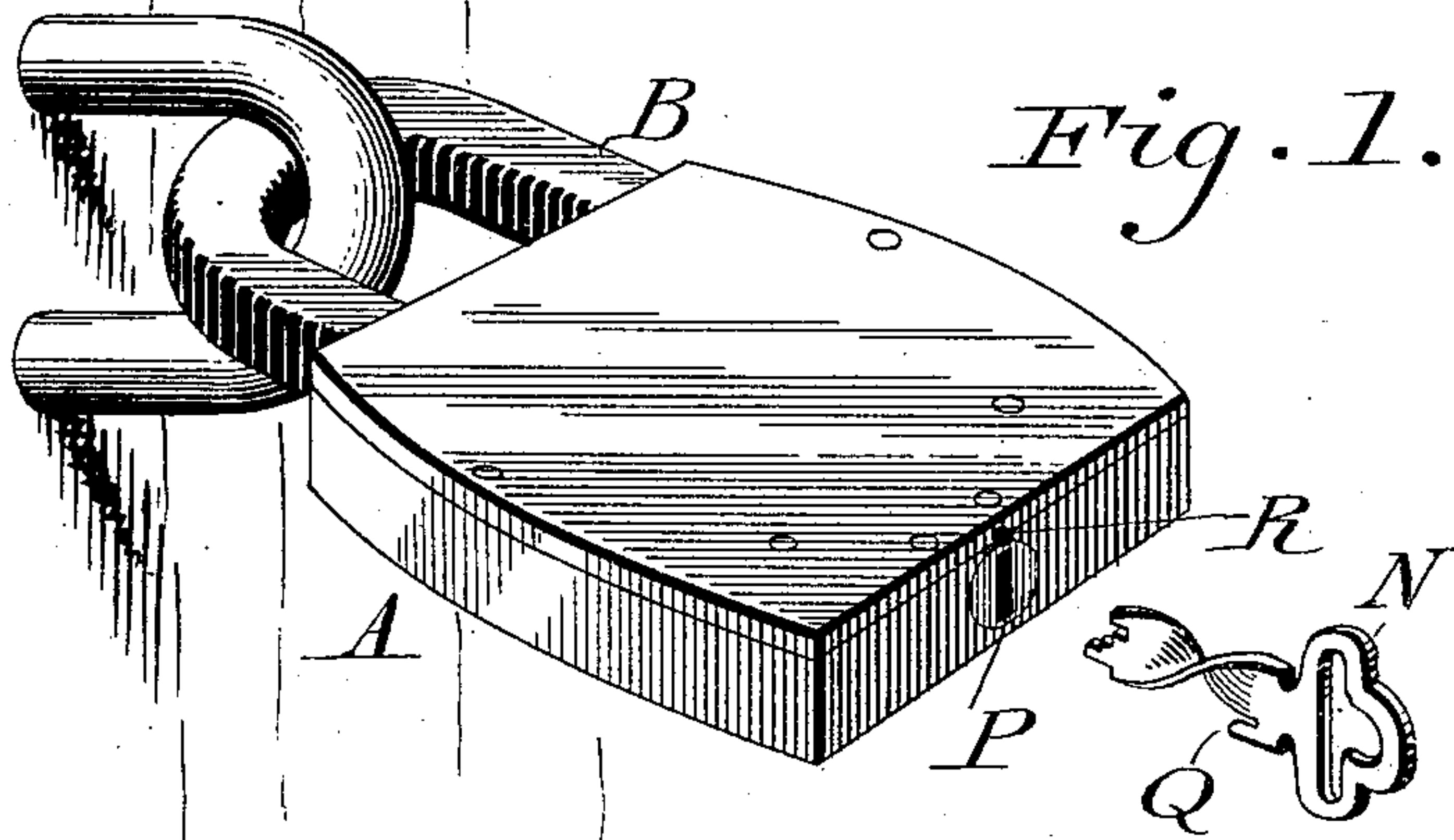


Fig. 2.

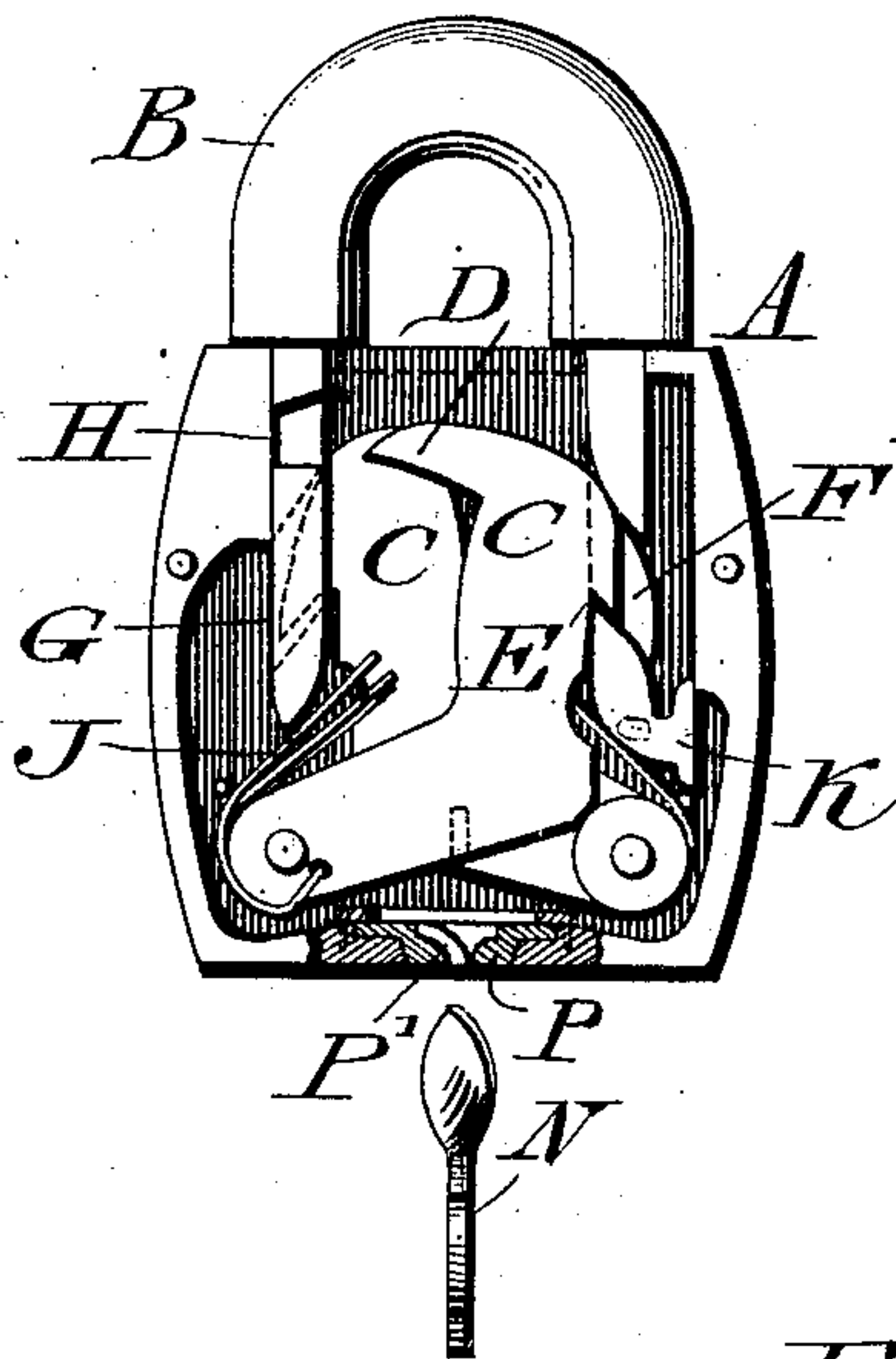


Fig. 3.

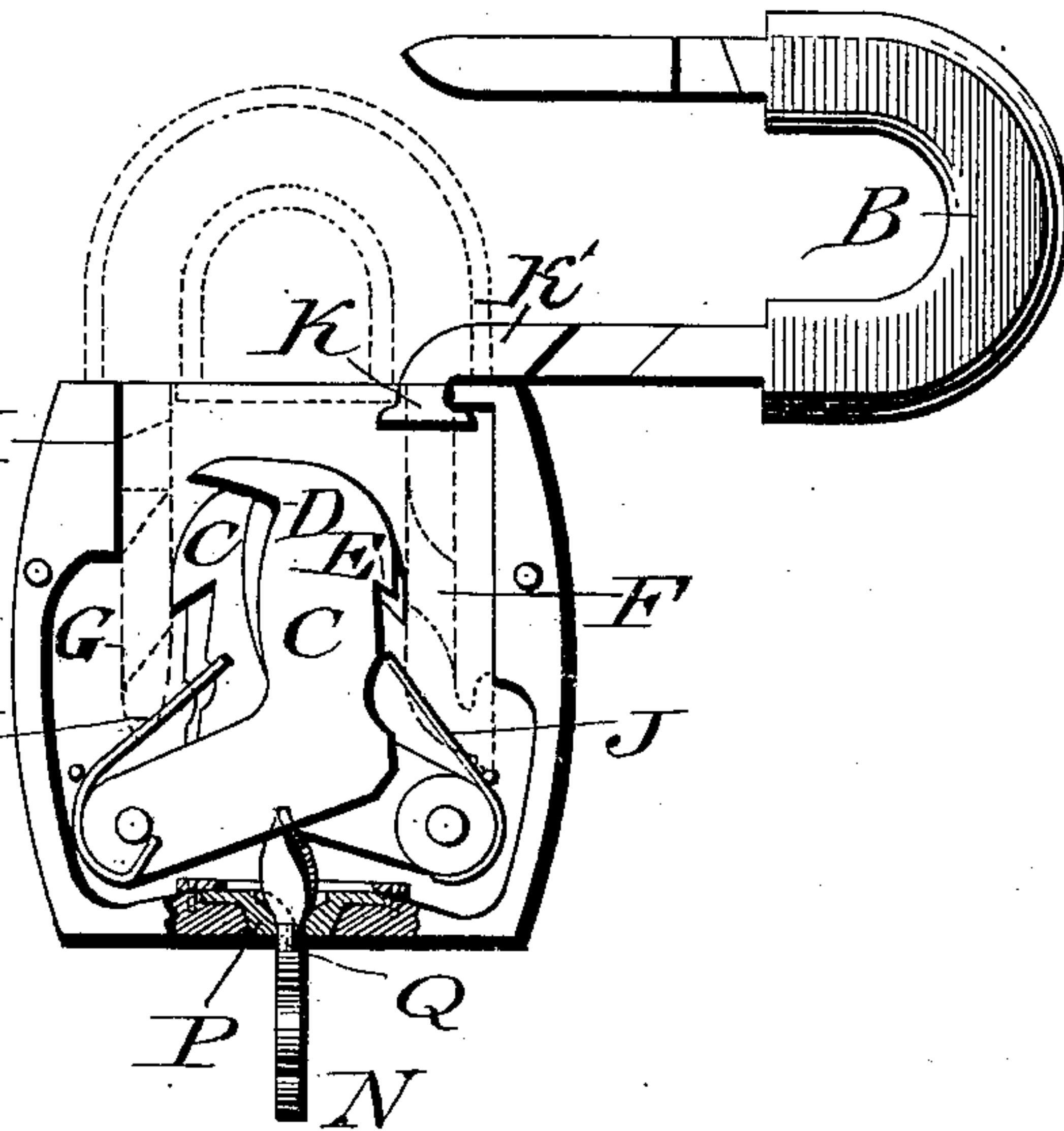
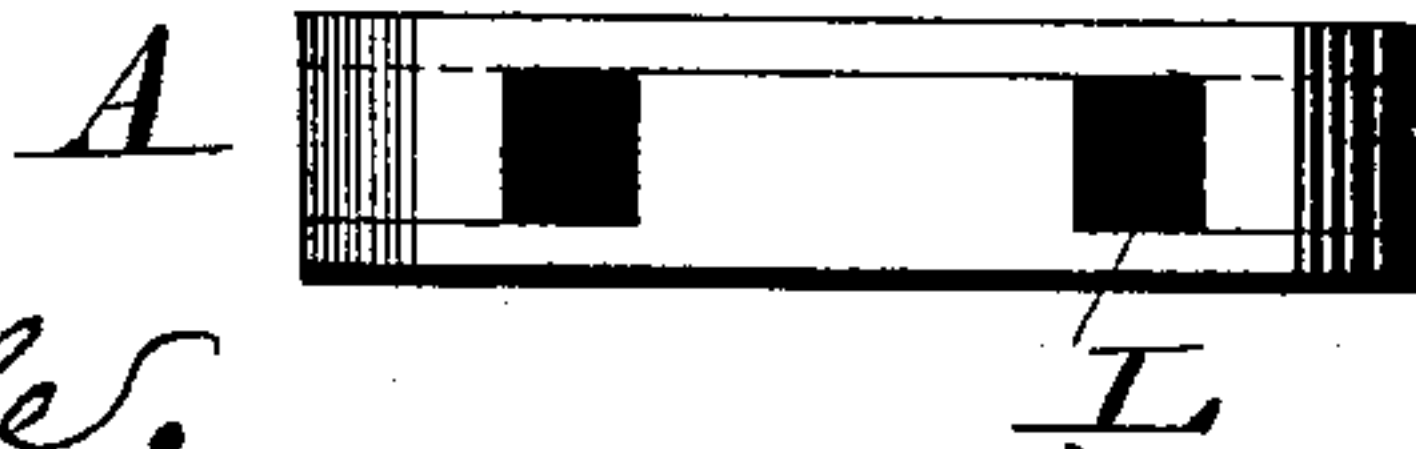


Fig. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK W. SCHULTZE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR
OF ONE-HALF TO GEORGE F. ROTHACKER, JR., OF SAME PLACE.

PADLOCK.

SPECIFICATION forming part of Letters Patent No. 486,685, dated November 22, 1892.

Application filed March 19, 1892. Serial No. 425,549. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. SCHULTZE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Padlocks and Keys, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a padlock having a bow the limbs of which are adapted to be locked by tumblers of novel construction, which tumblers, if moved by a false key, continue to engage with the bow, thus preventing unlocking of the latter, as will be hereinafter set forth, and pointed out in the claims.

It further consists of the novel construction of the bow and lock-casing, whereby when the bow is withdrawn from the case it may be turned on the latter as a hinge, said construction being hereinafter fully set forth, and definitely pointed out in the claims.

It also consists of a key of twisted or spiral form, whereby, as the keyhole is of similar form, the introducing of a pick or other implement into the casing through said hole is prevented, and in providing said key with a guiding lug or tooth, as will be hereinafter more fully described.

Figure 1 represents a perspective view of a padlock and key embodying my invention. Figs. 2 and 3 represent views of the interior of the same, the bottom plate being partly in section. Fig. 4 represents a top view thereof, the bolt being removed.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates the casing of a padlock, and B the bow thereof.

C designates spring-pressed tumblers, which are pivoted at their lower ends on the casing A and have on opposite sides of their upper ends the noses D and E, which noses are adapted to enter recesses F and G in the legs of the bow, whereby the latter may be properly locked. In said legs is also the recess H, which is located above the recess G, so that should a false key be employed and the tumblers, say, on the right side be moved toward the left said tumblers advance toward the recess H and have their noses enter the

same, whereby the bow continues to be locked. When, however, the proper key is used, the tumblers leave their respective recesses, and their noses are located freely within the limbs of the bow, so that the bow is no longer controlled by the same, when the springs J, which bear against the tumblers and the bow, throw out the latter, whereby it may be disconnected from the hasp, as is evident.

In order to prevent disconnection of the bow from the casing, one limb of the same is formed with a foot K, whose normal position is vertical, as shown in Fig. 2. The opening L in the top plate in which the said limb has its play is of less width than that of the foot K, so that the latter cannot pass through the same. Now when the bow is thrown out it may be turned on the wall of said opening L as a hinge, and thus turned sidewise without being disconnected from the casing, as will be seen in Fig. 3. When the bow is again restored to upright position, it may be pushed into the casing and then engaged by the tumblers entering the proper recesses thereof, thus locking the bow. It will be noticed that the lower end of the limb of the bow has a segmental piece K' continuous thereof, the same curving outwardly. The foot K is secured to the outer end of said segmental piece K' and extends in a direction parallel with said limb, or in opposite direction up and down from said piece or arm K'. When the bow moves out, the foot K rides on the inner wall of the casing as a guide. When the top of the foot strikes the top wall of the casing, it fulcrums in the corner thereof, and thus the bow begins to turn outwardly and it describes a full quarter-circle, and so occupies a position at a right angle to the casing. The ends of the foot now rest under the opposite walls of the opening in which the limb of the bow is fitted, it being seen that the limb and segmental piece are of the same thickness, and the opening in the top of the casing is not enlarged to permit the passage and turning of the segmental piece therein, said opening thus remaining closed at all times, whereby the entrance of dirt is prevented and rattling of the bow obviated, as the limb fits snugly but freely in the opening it occupies, even while it describes its circle and right-angular motions.

N designates a key for engagement with the tumblers to unlock the bow. The shank of said key is twisted or spiral and has bits on the end for properly moving the tumblers, 5 so that they are withdrawn from the bow.

P designates a rotatable escutcheon, which is mounted in the bottom plate of the casing and having a keyhole P', of spiral form, whereby, as is evident, the introduction of a pick 10 or other implement into the casing through said keyhole is prevented, the spiral form of the same presenting a serious obstacle to said introduction.

On the side of the shank of the key, at or 15 about the inner end thereof, is a longitudinally-projecting prong or lug Q, which is adapted to enter an opening R in the bottom wall of the casing, it being noticed that when the key is inserted into the keyhole and 20 pressed inwardly the escutcheon rotates as the key advances, and when its motion is completed and further rotation of the escutcheon is prevented until the prong, by turning of the key, enters the opening R, when the key can 25 be pressed in to full extent, and the bits thereof are presented to the tumblers, it being evident that the key cannot be fully inserted through the escutcheon in a wrong direction, owing to said prong, such insertion, however, 30 when proper, permitting only the right bits to operate with certainty only the corresponding tumblers, thus disengaging the latter from the legs of the bow or shackle, and causing the unlocking of the same, as is evident.

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

1. A padlock having tumblers in opposite 40 ends, a bow with openings to receive said noses, a rotary escutcheon in said casing, hav-

ing a keyhole of spiral form, and a guide-opening adjacent thereto, said parts being combined substantially as described.

2. A padlock having spring-pressed tum- 45 blers pivoted at opposite sides of the casing, each of said tumblers having noses on opposite sides of their upper ends, and a bow with the openings F in one limb and the openings G and H in the other limb, the opening H be- 50 ing above the opening G, said parts being combined substantially as described.

3. A padlock having a guide-opening in its casing, a rotary escutcheon with a keyhole 55 of spiral form, and a key with a spiral shank, having a prong projecting longitudinally therefrom, substantially as described.

4. A padlock having spring-pressed tum- 60 blers pivoted at their lower end on opposite sides of the casing and having noses on their upper ends, a bow with openings to receive said noses, and a rotary escutcheon in the end of said casing, the springs of the tumblers bearing against the bow, said parts being 65 combined substantially as described.

5. A lock having its casing provided with the opening L in its top plate, a bow with a limb having openings therein, and a tumbler adapt- 70 ed to engage in said openings, the said limb of the bow having the segmental arm K at its lower end, both limb and arm fitting closely in said opening L, and the foot K at the outer side of the end of said arm, said foot being parallel with said limb and extending above 75 and below said arm and adapted to ride in the movements of the limb on the inner wall of the casing, said parts being combined substantially as described.

FREDERICK W. SCHULTZE.

Witnesses:

JOHN ROTHACKER,
JOSEPH GAIDES.