

(Model.)

J. S. PEACOCK.
PADLOCK.

No. 453,136.

Patented May 26, 1891.

Fig. 1.

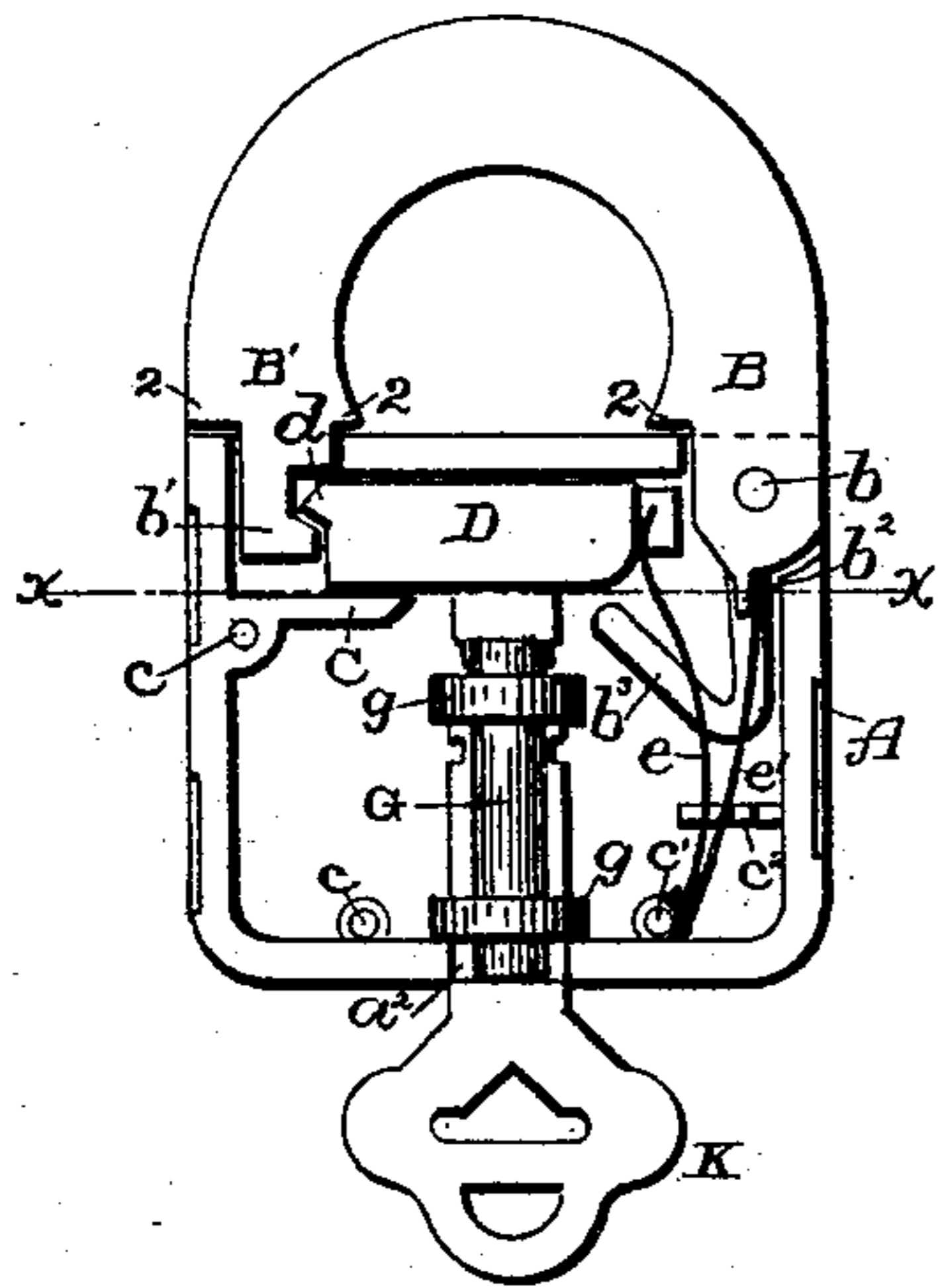


Fig. 2.

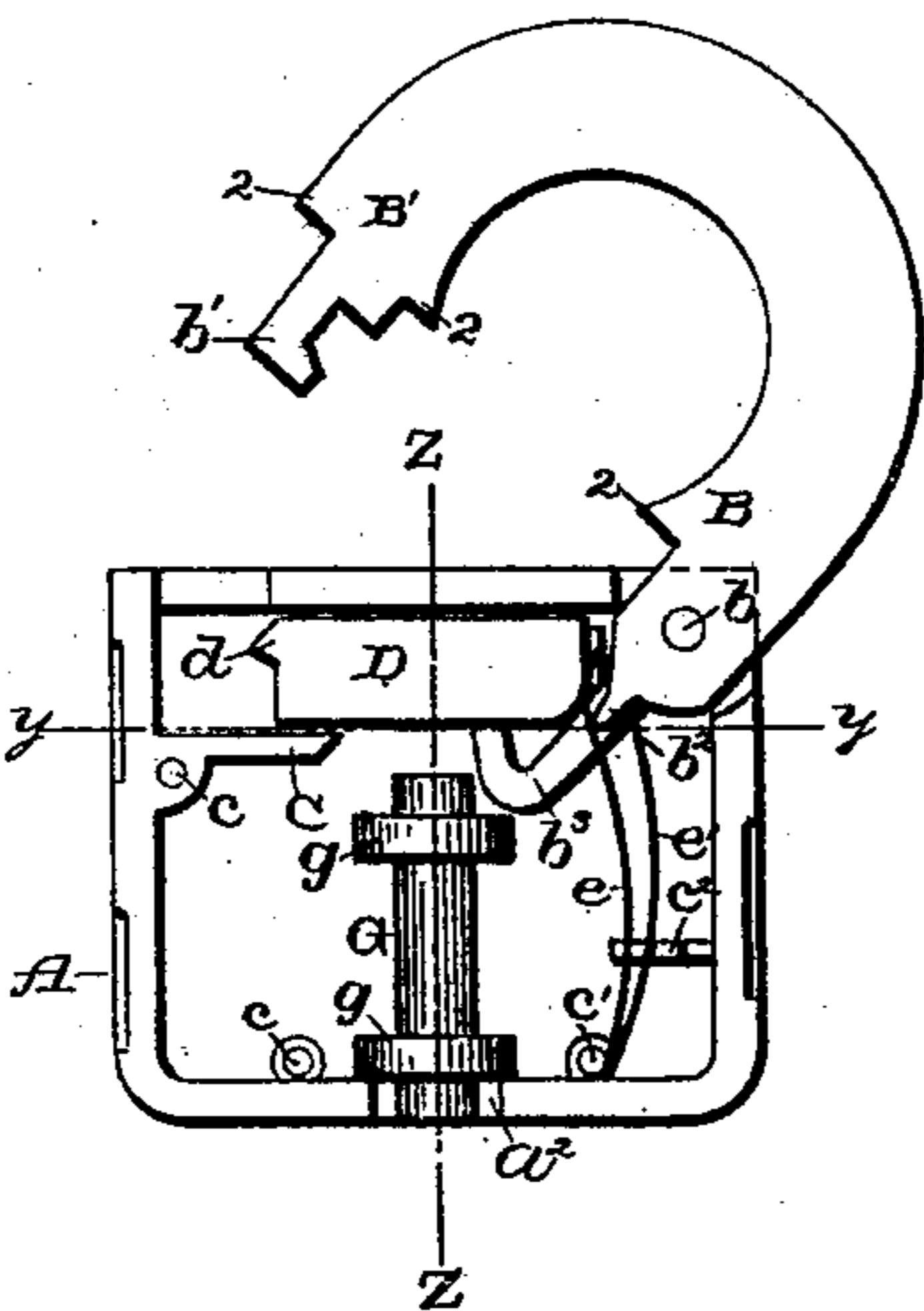


Fig. 3.

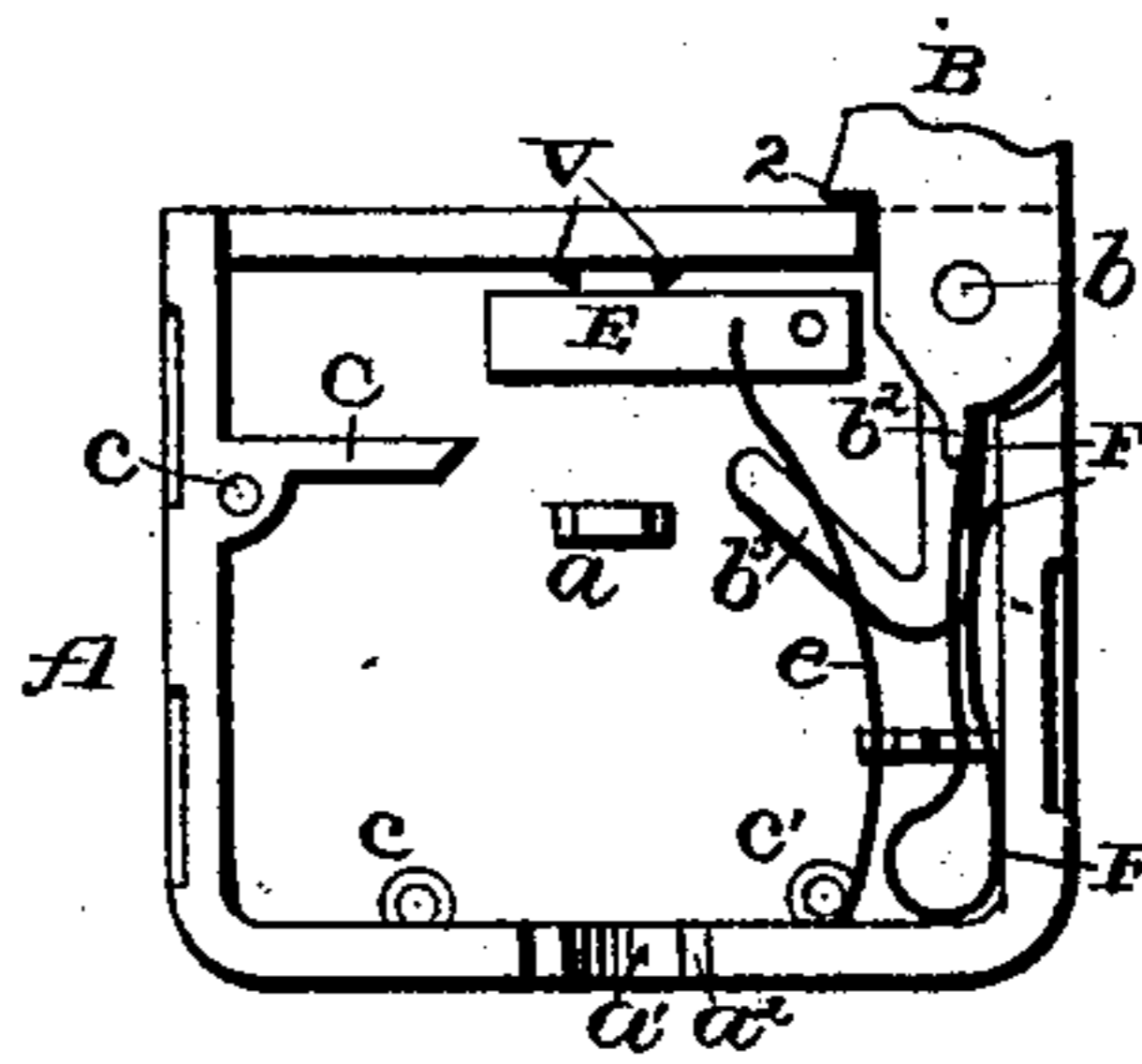


Fig. 5.

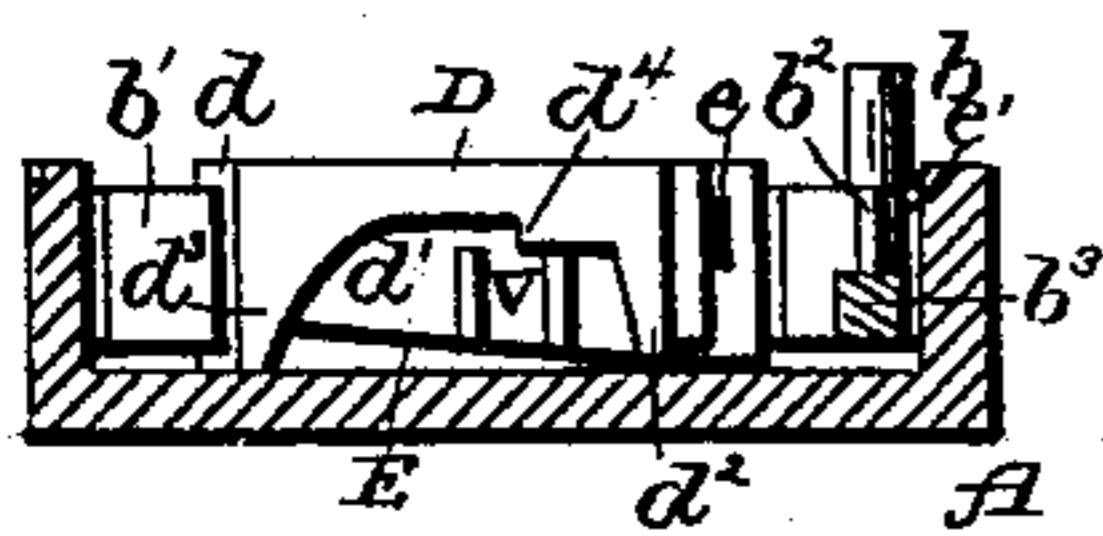


Fig. 6.

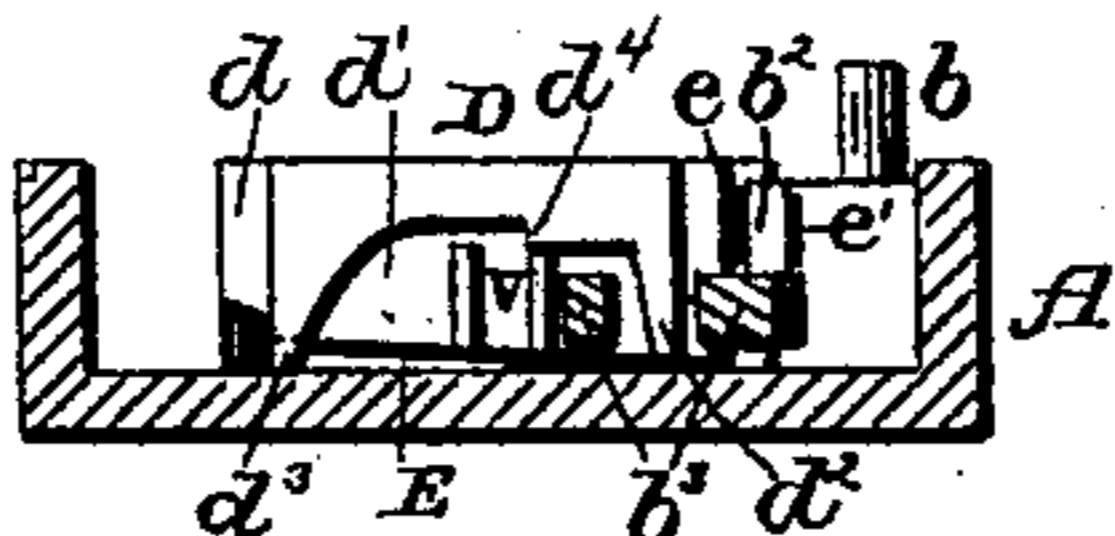


Fig. 4.



Fig. 7.

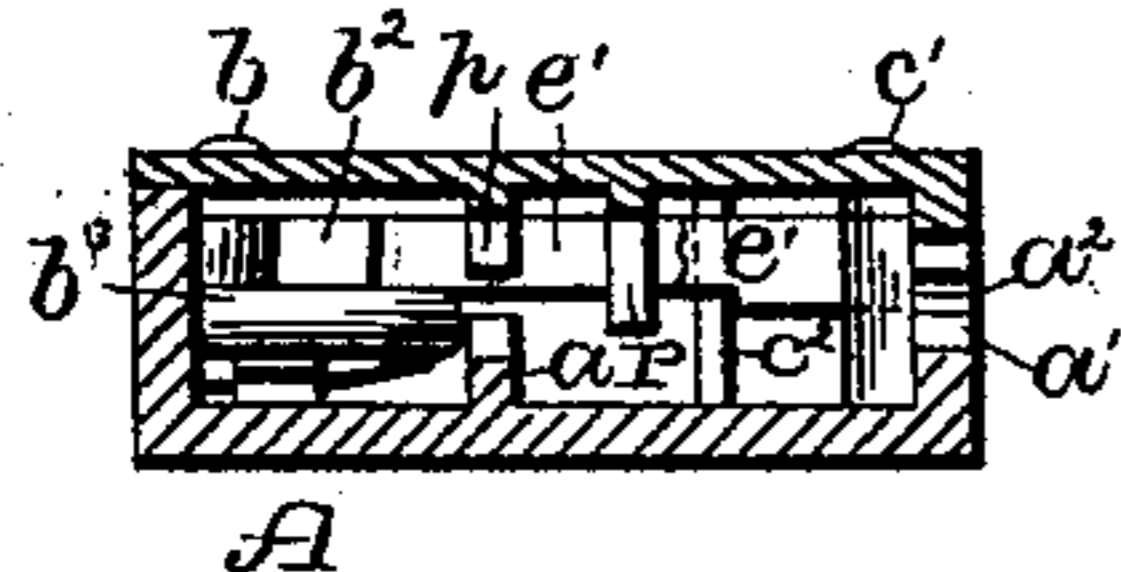


Fig. 8.

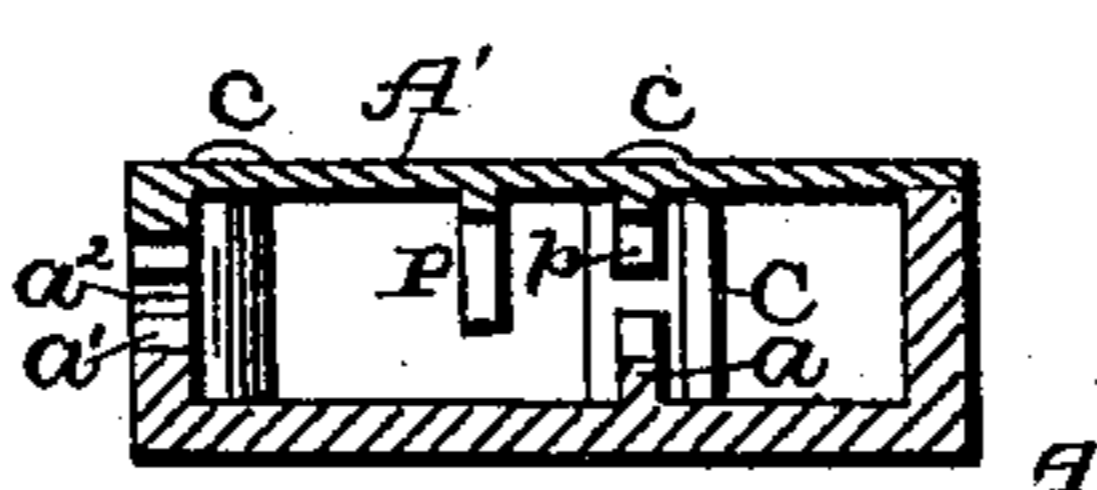


Fig. 9.

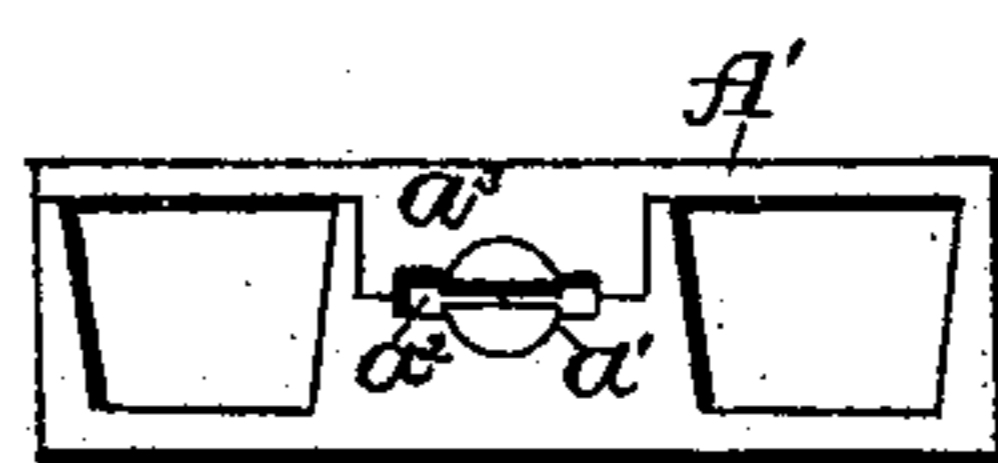
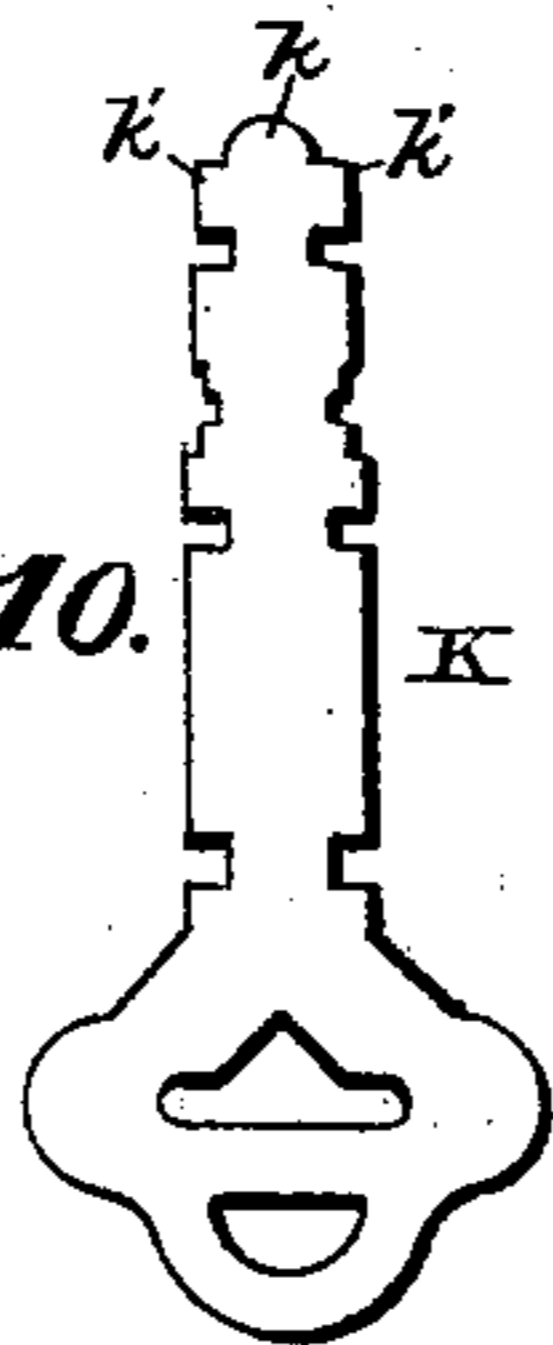


Fig. 10.



Witnesses:

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UNITED STATES PATENT OFFICE.

JACOB S. PEACOCK, OF LANCASTER, PENNSYLVANIA.

PADLOCK.

SPECIFICATION forming part of Letters Patent No. 453,136, dated May 26, 1891.

Application filed August 9, 1890. Serial No. 361,559. (Model.)

To all whom it may concern:

Be it known that I, JACOB S. PEACOCK, a citizen of the United States, residing in Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Padlocks, of which the following is a specification.

My invention relates to improvements in that class of locks in which a U-shaped bail or shackle with one arm permanently secured in the case and the other provided with an entering notch has the notched arm held in the case by a spring-actuated transverse bolt, which is adapted to be disengaged from the shackle-arm by a key; and the invention consists in the construction and combination of parts, as hereinafter described, and specifically pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a face view of a padlock embodying my improvements with the closing-plate removed, showing the shackle engaged by the bolt and the key in place. Fig. 2 is a similar view, but showing the bolt disengaged from the shackle and the key removed from the lock. Fig. 3 is a like view showing a portion of the shackle cut away and the bolt and key-guide removed. Fig. 4 is a view of the side of the key-guide at right angles with the part thereof shown in Figs. 1 and 2. Fig. 5 is a vertical section on the line $x x$, Fig. 1, the key being removed; and Fig. 6, a like section on the line $y y$, Fig. 2. Fig. 7 is a vertical section on the line $z z$, Fig. 2, looking toward the fast end of the shackle, with the key-guide and bolt removed and the closing-plate in place; and Fig. 8, a similar sectional view on the same line, but looking in the opposite direction. Fig. 9 is a plan view of the bottom of the lock, and Fig. 10 a side view of the key.

Similar letters indicate like parts throughout the several views.

Referring to the details of the drawings, A represents the lock-case; A', the closing-plate, and B B' the shackle, having shoulders 2, constructed to rest upon the top of the case.

c , c' , and b indicate rivet-pins, which when the closing-plate is fitted on the case engage perforations therein, the ends being riveted

down to hold the plate in place, as shown in Figs. 7 and 8. The pin b also serves as a pivot for the fast end B of the shackle and c' as a bearing for the ends of the springs $e e'$, to be described.

D is a transversely-sliding bolt having a recess d' in the under side and supported by legs $d^2 d^3$ and provided at one end with a lip d , adapted to engage a notch in the reduced extension b' of the detachable end B' of the shackle. The fast end B of the shackle is pivoted on the rivet-pin b and tapers toward the center at its extremity, having an inwardly-projecting lip b^2 extending from the upper portion of said tapered part and a hook b from the lower portion, the lip and hook being formed with said tapered end of the shackle and with each other. This hook bends toward the bolt D, and is adapted to engage the inside of the leg d^2 of said bolt when it is withdrawn from contact with the notch in the end b' of the arm B' and hold the same back from before the opening in the case through which the arm B' passes. A flat spring E extends longitudinally beneath the bolt and has one end thereof fastened to the back of the case near the pivoted end of the shackle. The other end is free to vibrate toward and from the back of the case, and when in its normal position it stands out from said back and bears against the inner face of the leg d^3 of the bolt when the latter is in engagement with the notch in the extension b' , offering a positive resistance to the accidental separation of those parts. When the bolt is disengaged from the notch, the vibrating end of the spring is depressed and the bolt rides over it, the spring being received in a recess in the under edge of the leg d^3 .

$e e'$ represent flat springs, the heels or stationary ends of which bear against the enlarged base of the rivet-pin c' , whence they extend toward the top of the case, resting on an intermediate rib formed in the case and bearing against a stud c^2 on the rib. The free end of the spring e is in contact with the end of the bolt D adjacent to the fast end of the shackle, and acts to force said bolt into engagement with the notch in the extension b' , and the free end of the spring e' bears

against the lip b^3 to automatically open the shackle when the bolt is disengaged from the detachable end thereof.

In Fig. 3 is shown a modified form of spring F, adapted to be used instead of the spring e' .

G represents a key-guide, consisting of a cylinder having a longitudinal slot g' cut entirely through it from end to end, the sections thus formed being held together by bosses g , formed with the cylinder, which also serve as stops to prevent longitudinal movement of the key-guide. The ends of this guide rest in bearings a a' of the case and oppositely-located bearings a^3 and p , formed on the inner face of the closing-plate, the bottom end plate of the case being cut out to receive the bearing or ear a^3 and to permit the key-guide to be put in place. On each side of the bearing a' and the corresponding bearing a^3 of the closing-plate the metal is cut away to form a slot a^2 , through which the wards of the key pass when it is inserted in the lock.

There is a projection P formed on the inner face of the closing-plate, which embraces the cylindrical portion of the key-guide between the upper bosses and is adapted to be engaged by a notch in the key. The position of the projection P between the ends of the key-guide is varied in different locks, as is also the notch in the various keys adapted to engage the same to correspond with the positions of said projections P in the locks said keys are intended to operate.

In operating, the detachable end of the shackle being engaged by the bolt, the key K is inserted, occupying the position shown in Fig. 1, the reduced end k resting between the ribs V, formed on the top plate of the case. The key is then turned to the right, the key-guide revolving therewith, when one of the wards k' engages and depresses the spring E and the other the shoulder d^4 , formed in the recess d' , and forces the bolt back out of contact with the detachable end of the shackle. The position of shoulder d^4 is such that the spring E is depressed and its vibrating end brought opposite the recess in the under edge of the leg d^3 before the said shoulder is engaged by one of the wards k' . Upon the separation of the bolt from the arm B' the spring e' , acting on the lip b^2 , forces the shackle open and the hook b^3 into engagement with the leg d^2 of the bolt. When the shackle is closed, the hook is disengaged from the leg d^2 and the bolt is forced into the notch in the end b' of the shackle by the spring e . The vibrating end of the spring E, being uncovered by the leg d^3 , flies out and bears against the inner face of that leg.

No claim is made in this specification to the construction by which the key-opening is formed, as that construction is claimed in an application filed by myself January 7, 1891, Serial No. 377,001.

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

1. In a padlock, the combination, with the shackle, of a bolt constructed to engage the separable end of said shackle, and a vibrating spring, the front of the free end of which is adapted to engage automatically against a shoulder on the bolt and to be disengaged therefrom by the pressure of the key on said spring, substantially as and for the purpose specified.

2. In a padlock, the combination, with a "fast shackle" having a notched arm, of a bolt constructed to engage said notch, and a hook formed on the fast end of the shackle and adapted to engage a shoulder in said bolt as the shackle is opened, substantially as specified.

3. In a padlock, the combination, with a fast shackle having a notched arm, of a bolt constructed to engage said notch, and having a recess formed therein, a hook formed on the fast end of the shackle and adapted to engage the recess in the bolt as the shackle is opened, a spring for forcing the bolt into engagement with the notched arm, and a spring adapted to engage the hook with the recess in the bolt, substantially as specified.

4. In a padlock, the combination, with a fast shackle having a notched arm, of a recessed bolt constructed to engage said notch, a vibrating spring adapted to have the end thereof engage in front against a shoulder of said bolt, a hook formed on the fast end of the shackle and adapted to engage the recess in the bolt as the shackle is opened, a spring for forcing the bolt into engagement with the notched arm, and a spring adapted to engage the hook with the recess in the bolt, substantially as specified.

5. In a padlock, the combination, with a locking-bolt and the ribs V, formed on the top plate of the case and adapted to receive the end of a key between them, of a revoluble key-guide provided with bosses g and slotted to receive a key, and bearings formed on the inside of the case and the closing-plate, substantially as specified.

6. In a padlock, the combination, with a notched shackle, a bolt having a recess d' in one face thereof and constructed to engage said notch, a vibrating spring secured to the lock-case behind said recess and adapted to engage in front against a side thereof when the bolt is in engagement with the notch, and a spring for forcing the bolt into engagement with the notched arm, of ribs formed on the top plate of the case, adapted to receive the end of a key between them, a revoluble key-guide provided with bosses g and slotted to receive a key, and bearings formed on the inside of the case and the closing-plate, substantially as and for the purpose specified.

7. In a padlock, the combination, with a fast shackle having a notched arm, a recessed bolt constructed to engage said notch, a vibrating spring secured to the lock-case behind said recess and adapted to engage

in front against a side thereof when the bolt
is in engagement with the notch, a hook
formed on the "fast end" of the shackle and
adapted to engage the recess in the bolt as
5 the shackle is opened, a spring for forcing
the shackle into engagement with the notched
arm, and a spring adapted to engage the hook
with the recess in the bolt, of ribs formed
on the top plate of the case adapted to re-
10 ceive the end of a key between them, a rev-

oluble key-guide provided with bosses *g* and
slotted to receive a key, and bearings on
the inside of the case and the closing-plate,
all constructed and operating substantially
as and for the purpose specified.

JACOB S. PEACOCK.

Witnesses:

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