

(No Model.)

J. ROCHE.
PADLOCK.

No. 555,337.

Patented Feb. 25, 1896.

Fig. 1

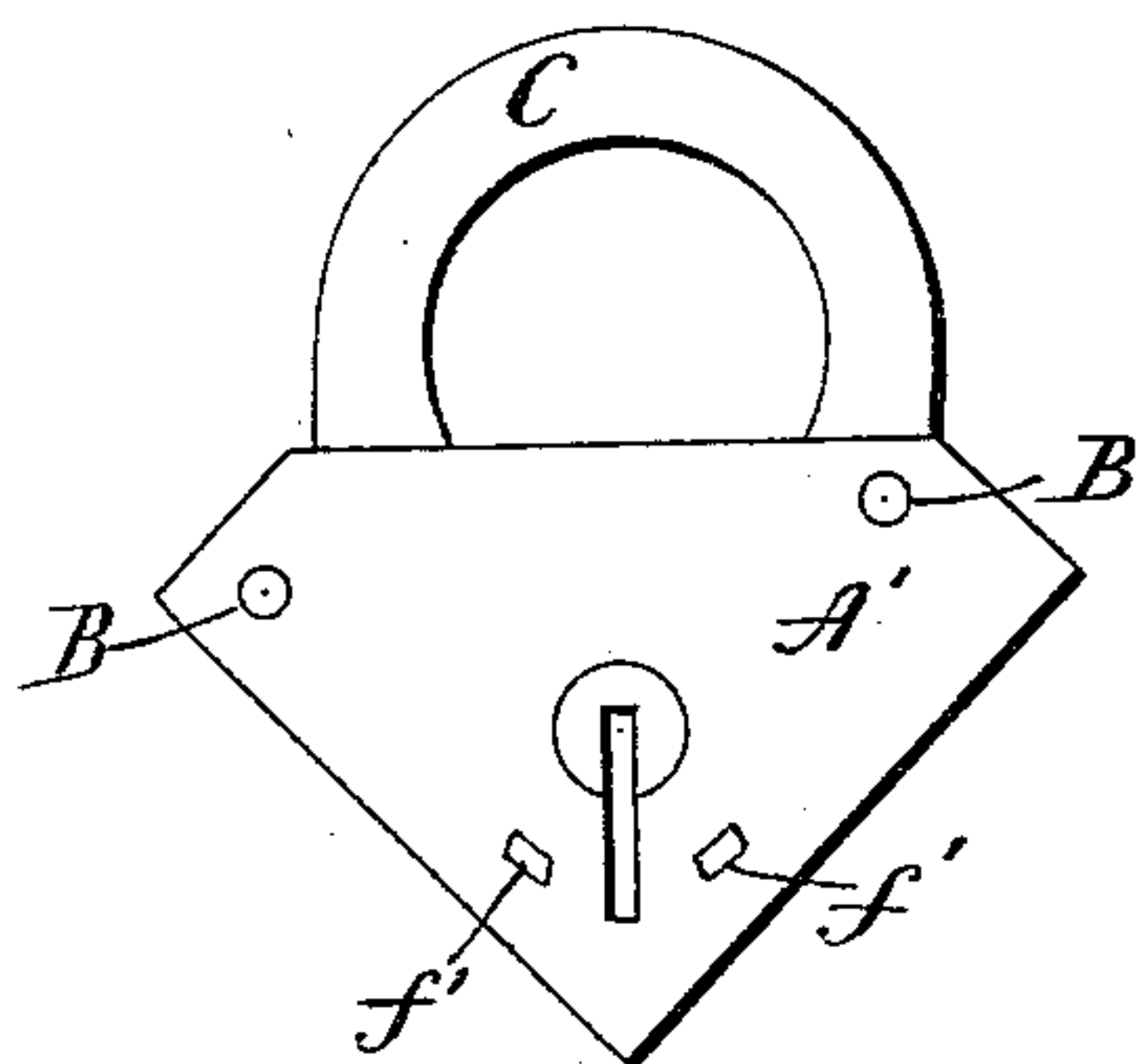


Fig. 2

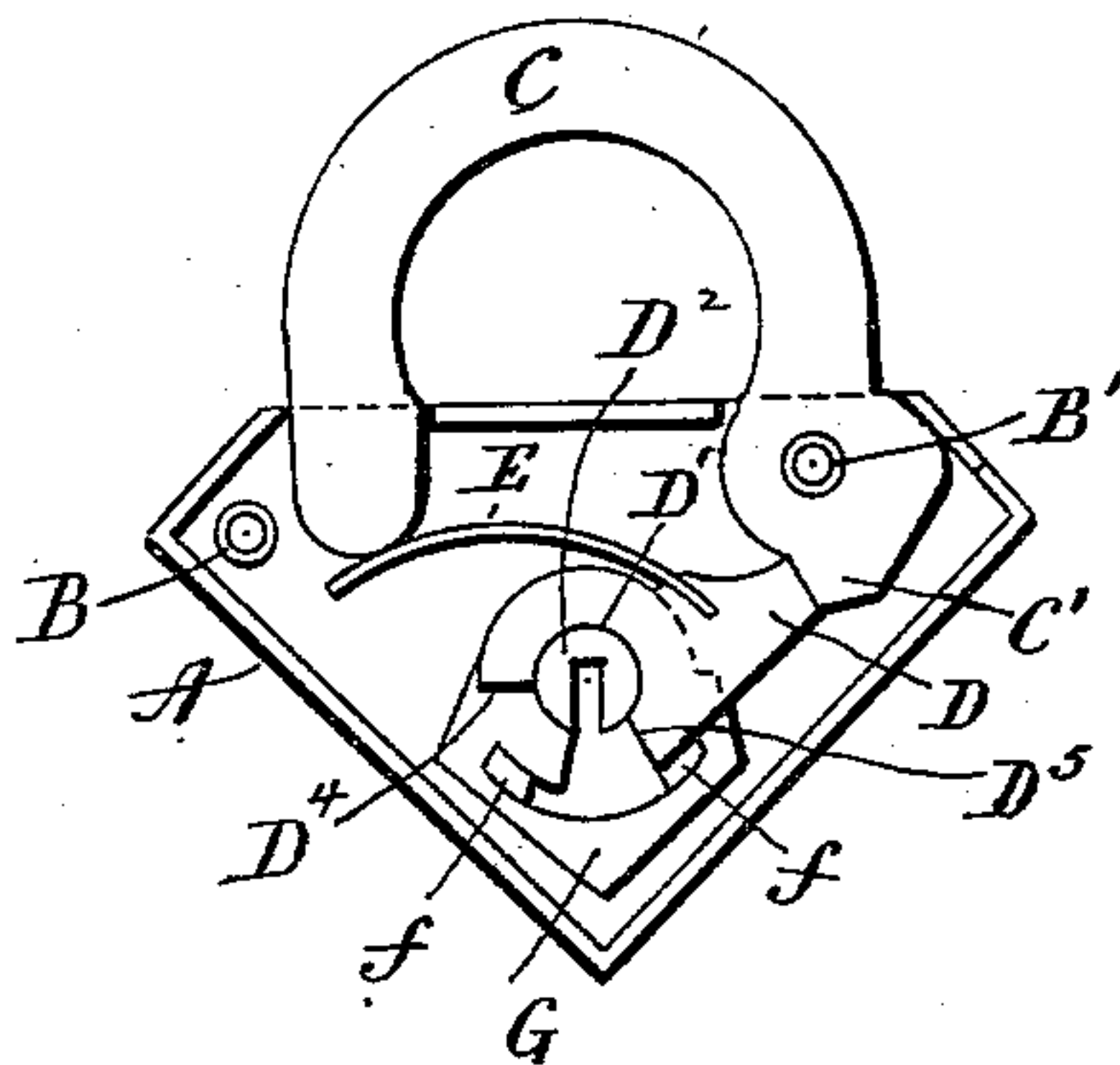


Fig. 3

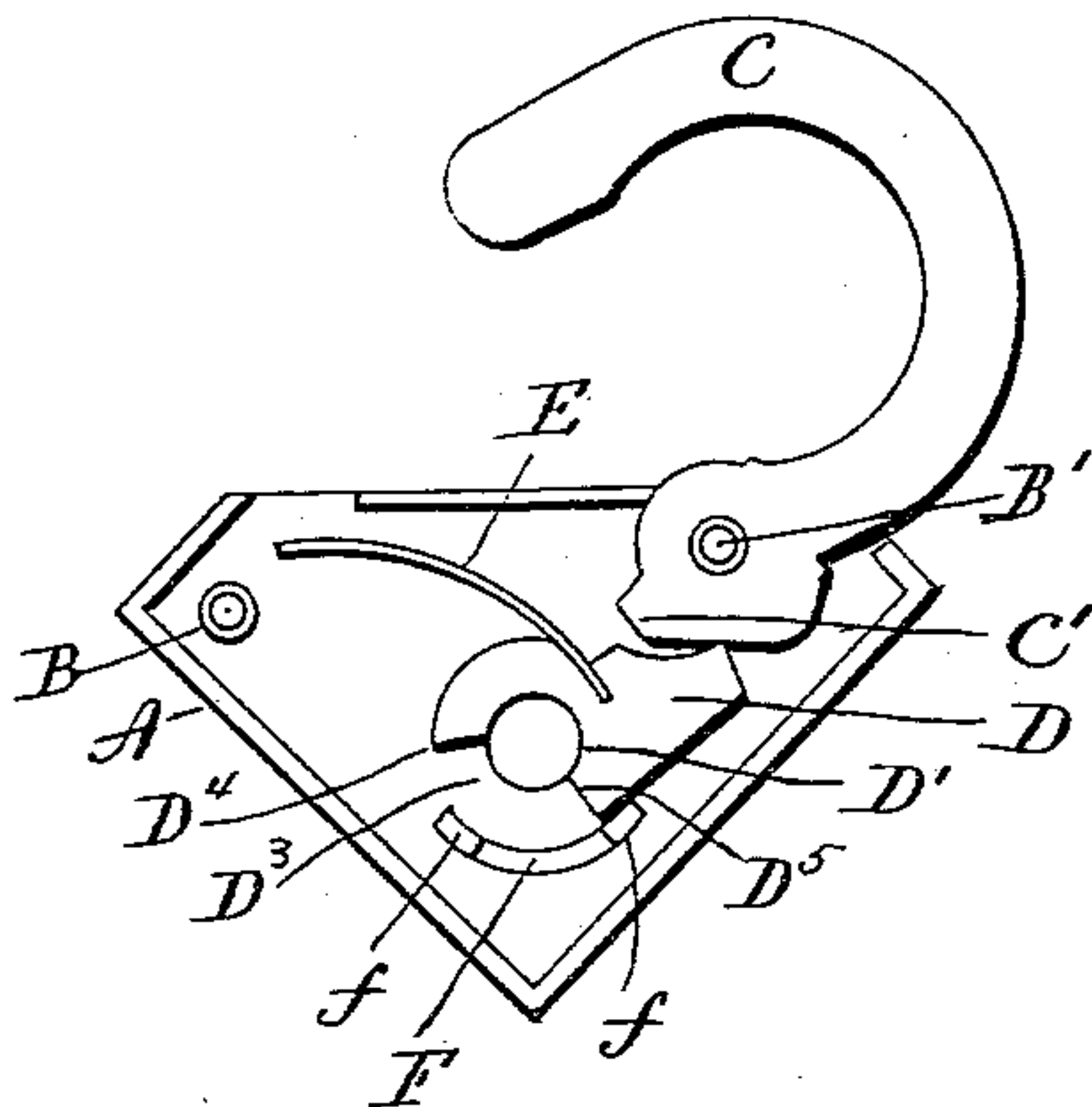


Fig. 4

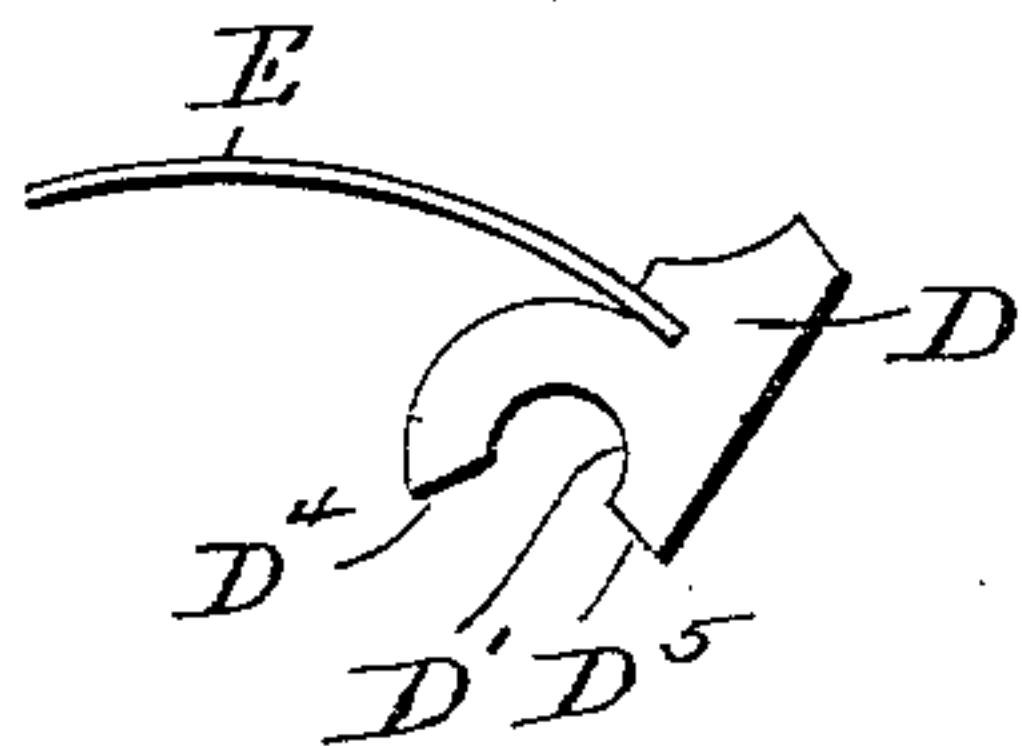


Fig. 5

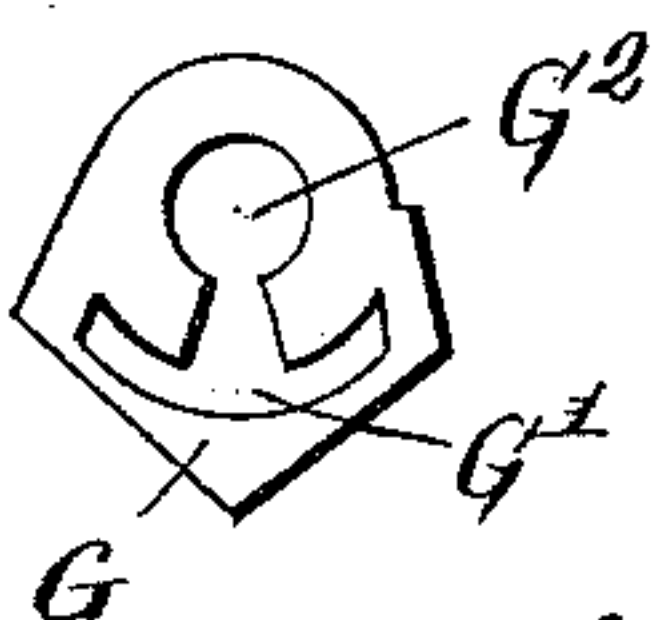
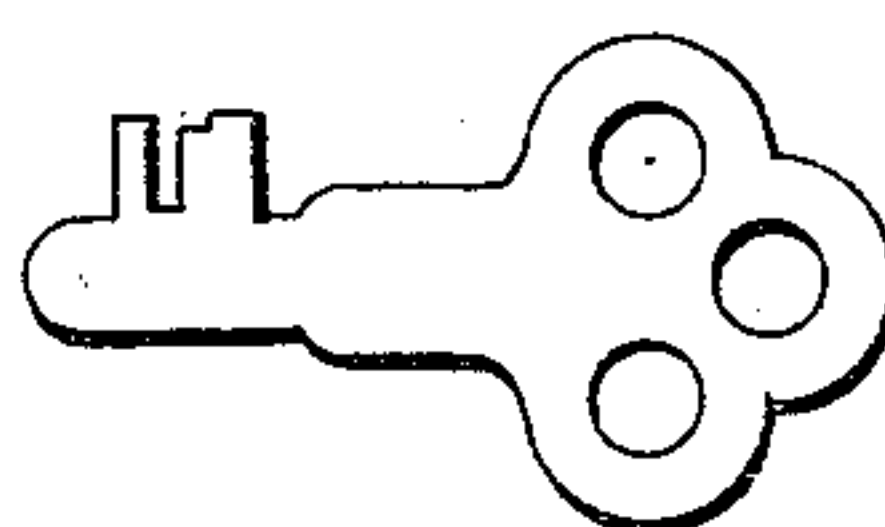


Fig. 6



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES ROCHE, OF TERRYVILLE, CONNECTICUT, ASSIGNOR TO THE EAGLE LOCK COMPANY, OF SAME PLACE.

PADLOCK.

SPECIFICATION forming part of Letters Patent No. 555,337, dated February 25, 1896.

Application filed November 1, 1895. Serial No. 567,585. (No model.)

To all whom it may concern:

Be it known that I, JAMES ROCHE, of Terryville, in the county of Litchfield and State of Connecticut, have invented a new Improvement in Padlocks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which
10 said drawings constitute part of this specification, and represent, in—

Figure 1, a view in elevation of a padlock constructed in accordance with my invention; Fig. 2, a view thereof with the cap of the case
15 removed and the parts shown in their locked positions; Fig. 3, a similar view with the parts shown in their unlocked positions; Fig. 4, a detached view of the combined tumbler and bolt and the spring; Fig. 5, a detached view
20 of the ward-plate; Fig. 6, a detached view of the key.

My invention relates to an improvement in padlocks, the object being to produce at a low cost for manufacture a simple, compact, and
25 convenient self-locking padlock, composed of few parts and constructed with particular reference to preventing it from being jarred open.

With these ends in view my invention consists in a padlock having certain details of construction and combinations of parts, as
30 will be hereinafter described and pointed out in the claims.

As herein shown, the body A and cap A' of
35 the case are triangular in form in general outline, the corners of the upper edges of the triangle being cut away. The said body and cap of the case are secured together by means of two pillars or posts B B', which are fixed in
40 position in the said body of the case and are riveted down or upset at their ends upon the outer face of the body and cover. The shackle C of the lock is pivotally hung upon the pillar B', as clearly shown in Figs. 2 and 3, its
45 ends entering the case through slots or notches cut in the edges thereof in the usual manner. The pivoted end of the shackle is constructed with an inwardly-extending locking-lug C', which coacts with the combined bolt and
50 tumbler, having a locking-finger D which coacts with the locking-lug C' before mentioned,

a central opening D' which receives the slotted revoluble key-hub D², and a keyway D³ leading out of the said central opening and provided for the reception of the key, the end
55 walls D⁴ and D⁵ of the said keyway being abutted against by the key, and the wall D⁴ constituting the operating-face by means of which the combined bolt and tumbler is
60 turned to release the shackle. A flat sheet-metal spring E having one end inserted into a slit in the said combined part and its opposite end engaged with the free end of the shackle exerts a constant effort to maintain
65 the said part in its locked position, and also operates to throw the shackle into its open position when the bolt is unlocked.

A longitudinally-bowed plate forming a fender F is rigidly mounted in the body A' of the case at a point concentric with and
70 just below the slotted key-hub, the said plate having two upwardly-extending fingers f f' which pass through correspondingly-arranged small holes f' f' formed in the cap A' of the case, as shown in Fig. 1. A ward-
75 plate G is supported upon the key-hub D² and the fender F and adapted to set down over the same and to permit the key to pass through it by being provided with an opening G² in the shape of a keyhole, and a segmental or
80 bowed opening G' corresponding to the shape of the fender and intersected by the said key-hole-opening.

The key H may be of any approved construction.
85

It will be understood that normally and when the padlock is locked the spring E will maintain the combined bolt and tumbler in position to hold the locking-finger D thereof in engagement with the locking-lug C of the
90 shackle, as clearly shown in Fig. 2. Under these conditions any outward pull on the shackle tending to draw it open will be resisted by the combined tumbler and bolt, which is firmly held against displacement in
95 the line of such strain by the key-hub; but if the key is introduced into the lock and turned so as to engage with the operating-face D⁴ of the combined bolt and tumbler the same may be turned against the force of
100 the spring E into the position in which it is shown in Fig. 3 of the drawings, and in which

the locking-finger D is cleared from the lug C'. As soon as this clearance takes place, the free end of the spring acts against the free end of the shackle and throws the same open and into the position shown in Fig. 3. Now when the free end of the shackle is returned into the lock-case again so as to engage with the spring E the beveled outer edge of the locking-lug C' of the shackle engages with the inner edge of the locking-finger D of the bolt and turns the latter on its center until the end of the lug is cleared from the end of the bolt, after which the spring E acts to immediately throw the bolt into its locked position, the power of the spring being augmented for this purpose by the pressure put upon it by the engagement with it of the free end of the shackle, which by this time has been introduced into its home position in the lock-case.

It will be seen that my improved lock is extremely simple of construction and convenient of operation; that it is composed of very few parts and not liable to derangement, and that on account of its peculiar construction it cannot be jarred open.

I wish to call attention to the fact that the combined bolt and tumbler does not coact with the free or outer end of the shackle; but that the shackle is held in its locked position solely by the coaction of the locking-lug at its inner end and the locking-finger of the combined bolt and tumbler. This is very advantageous, for the inner end of the shackle-bolt is practically inaccessible, and the padlock is therefore much more difficult to pick than one where the locking is effected in whole or in part at the outer end of the padlock.

I would also call attention to the fact that in my improved padlock I employ but one spring, and that that is arranged so as to exert a constant effort to engage the locking-finger of the combined bolt and tumbler with the locking-lug of the shackle.

It is apparent that in carrying out my invention some changes and alterations from the construction shown and described may be made. I would therefore have it understood that I do not limit myself to the exact construction shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In a padlock, the combination with a shackle having its pivoted inner end furnished with a locking-lug, of a combined tumbler and bolt having a locking-finger to coact with the said lug but having no coaction or engagement with the free or outer end of the shackle, and also having an operating-face which is engaged by the key; and a spring arranged to exert a constant effort to engage the said locking-finger of the combined bolt and tumbler with the locking-lug of the shackle, the said finger and lug constituting the sole means of holding the shackle in its locked position, substantially as described.

2. In a padlock, the combination with a shackle having its pivoted end provided with a locking-lug, of a combined tumbler and bolt having a locking-finger, and an operating-face, a spring for turning the said combined part in one direction, a key-stud upon which the said combined part turns as upon a center, a fender located adjacent to the key-stud, and below the same, and a ward-plate supported upon the key-stud and fender, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES ROCHE.

Witnesses:

OTIS B. HOUGH,
JAMES A. RUSSELL.