

(No Model.)

A. A. PAGE.
PADLOCK.

No. 539,235.

Patented May 14, 1895.

Fig. 1.

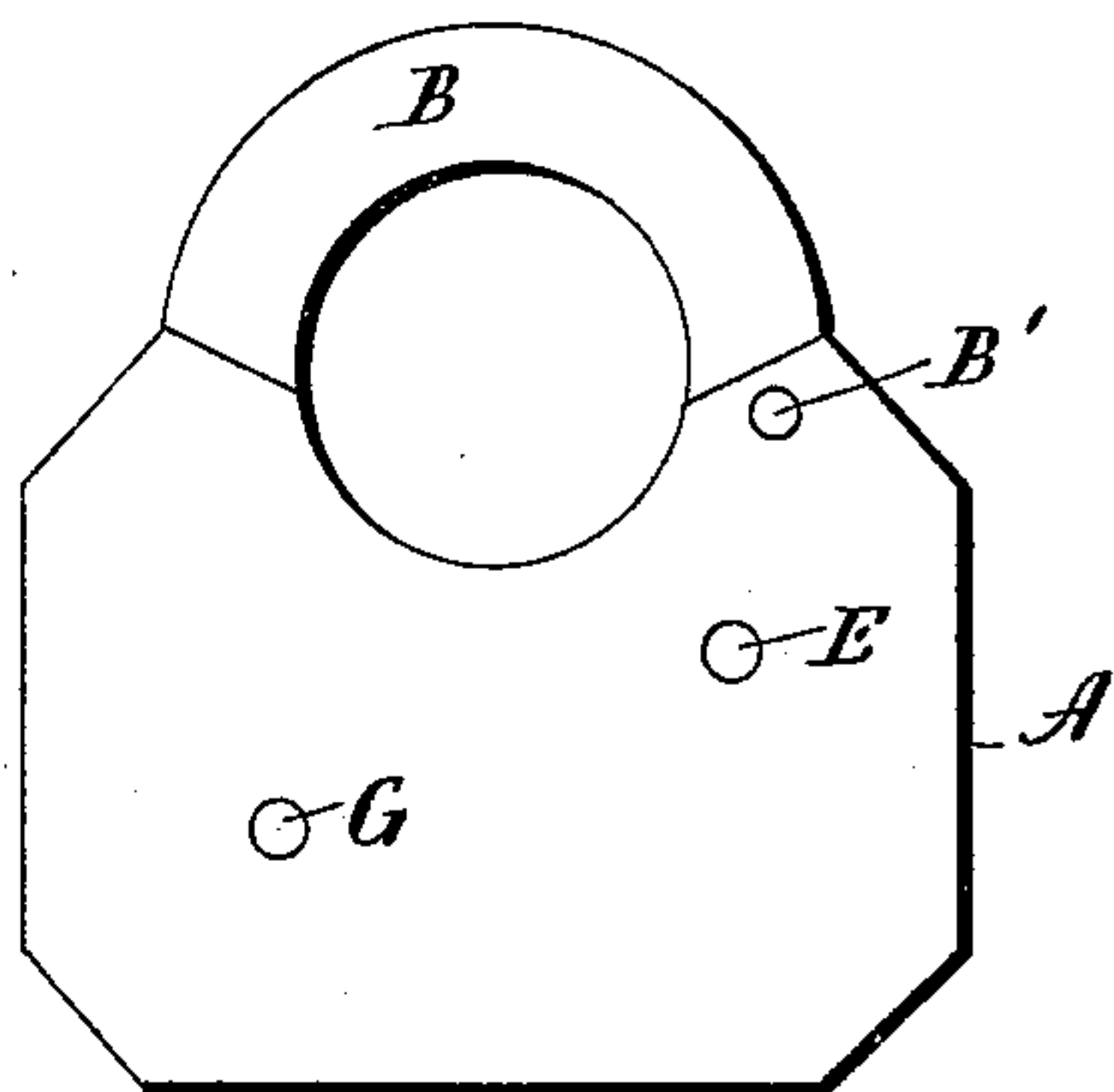


Fig. 2.

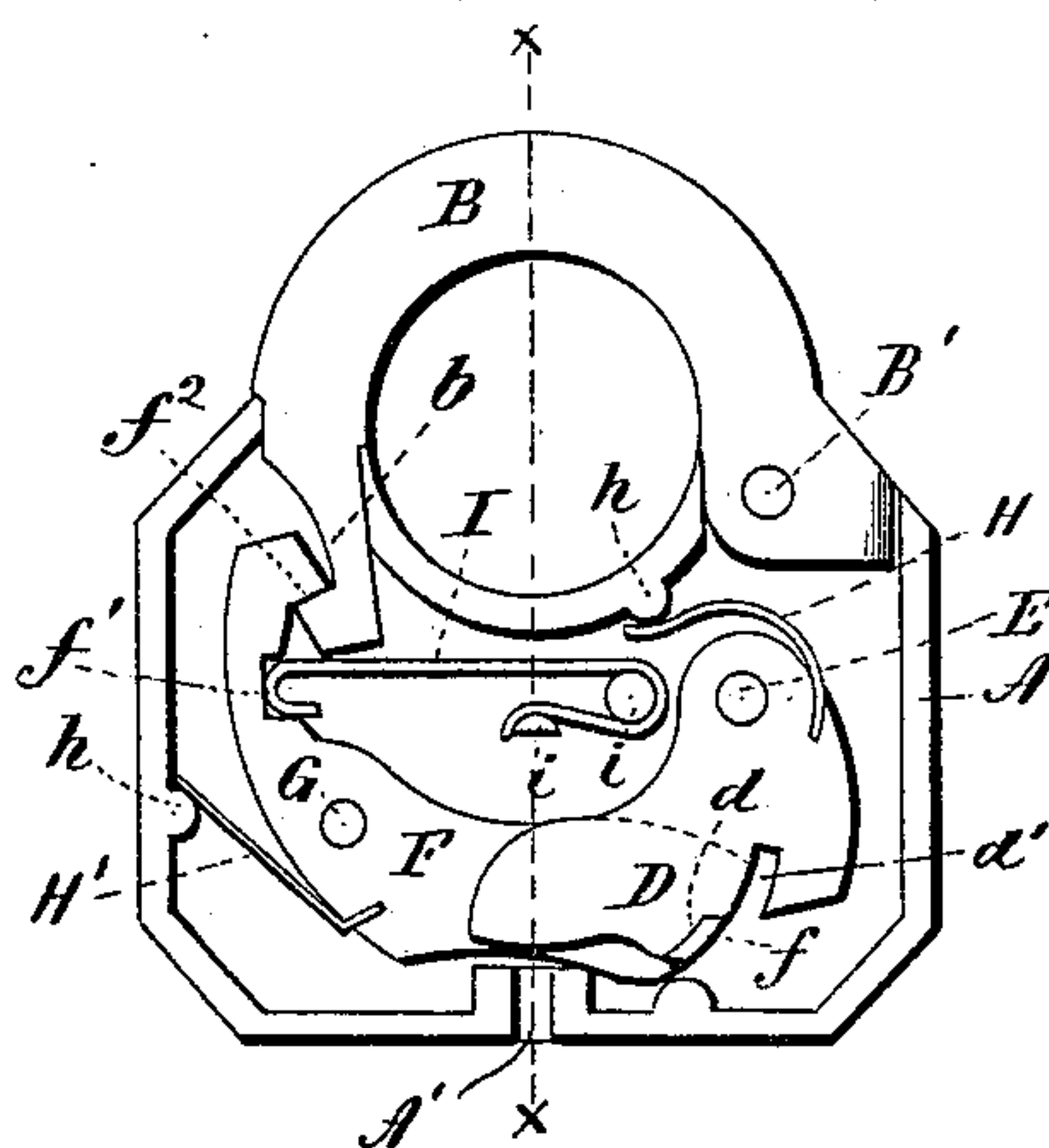


Fig. 4.

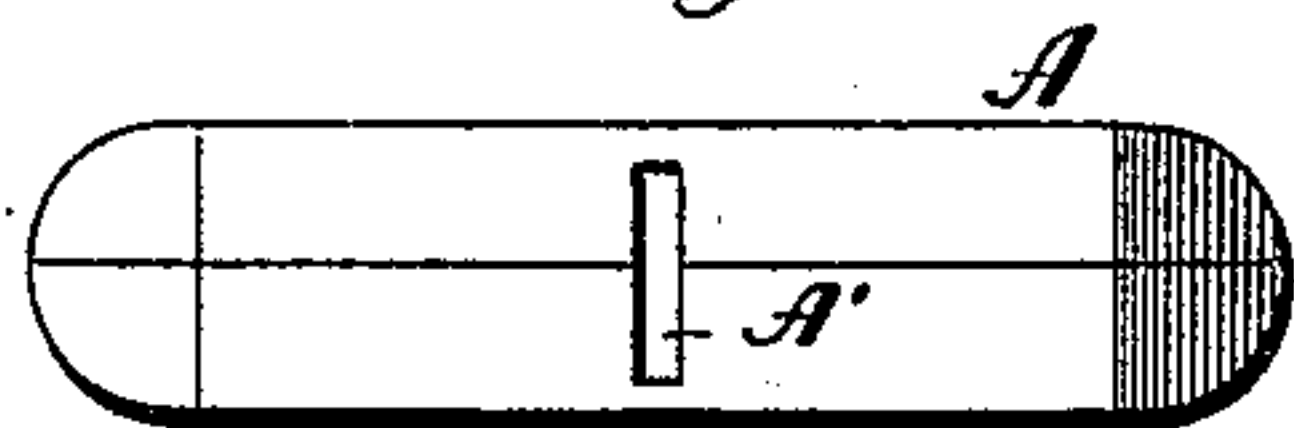


Fig. 5.

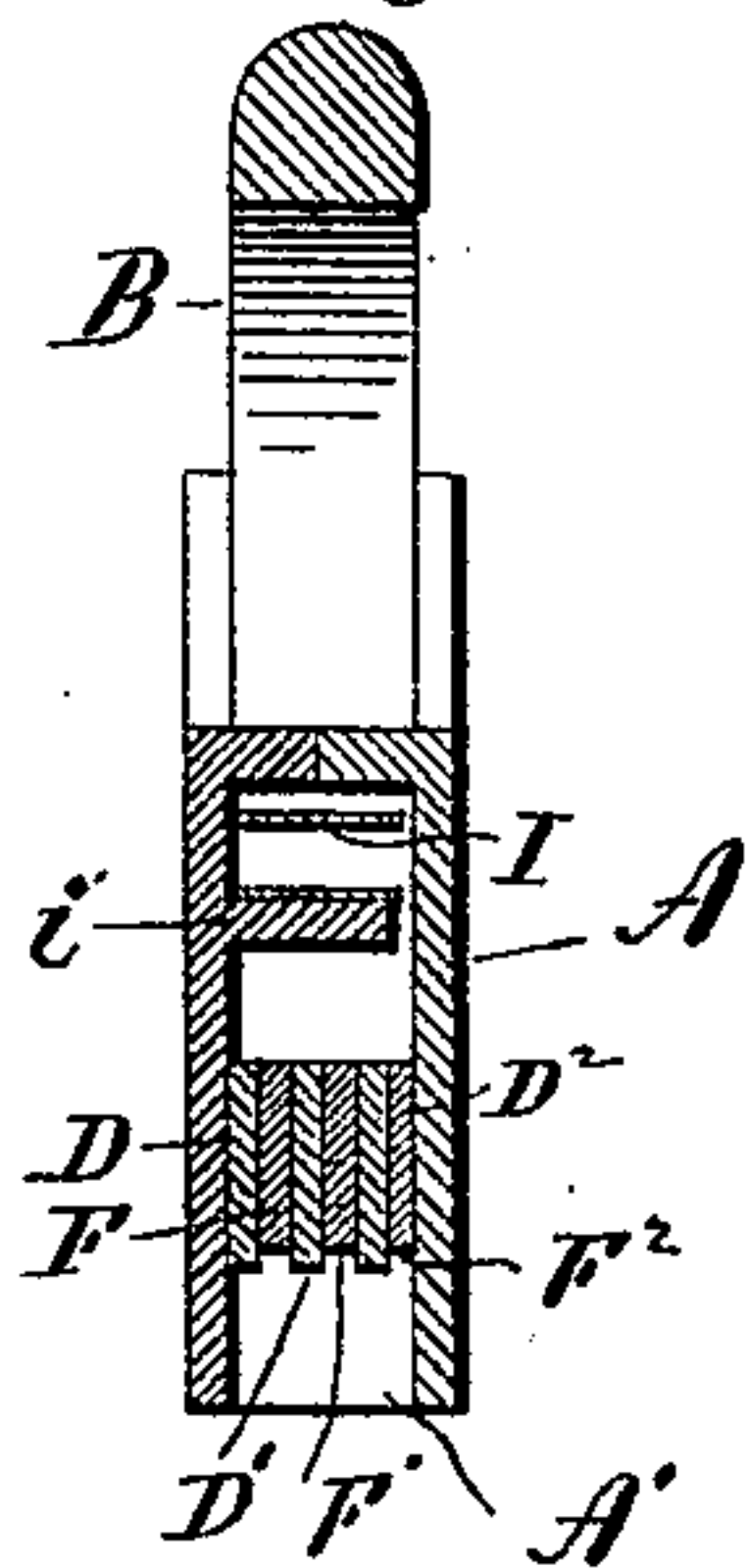


Fig. 3.

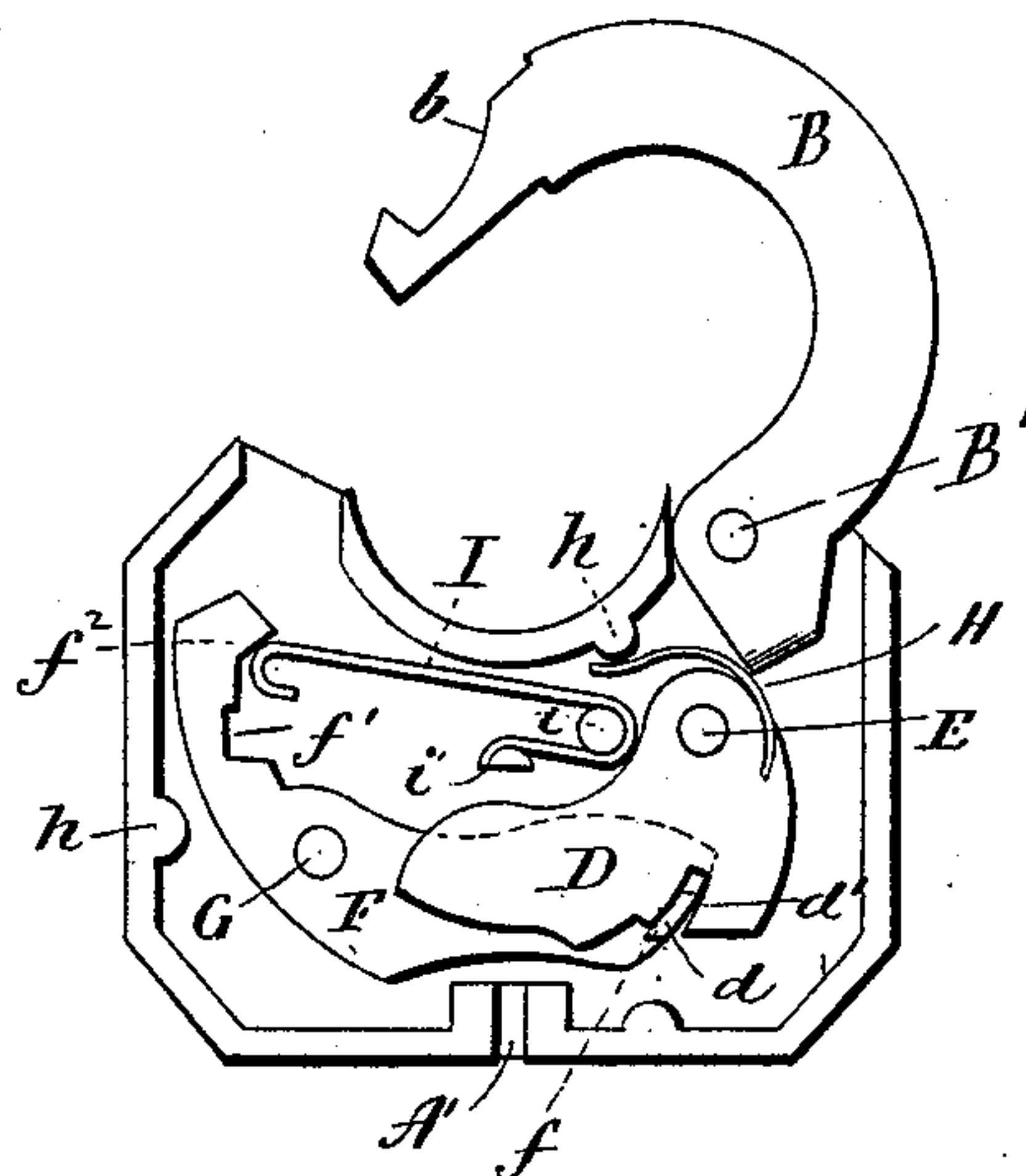
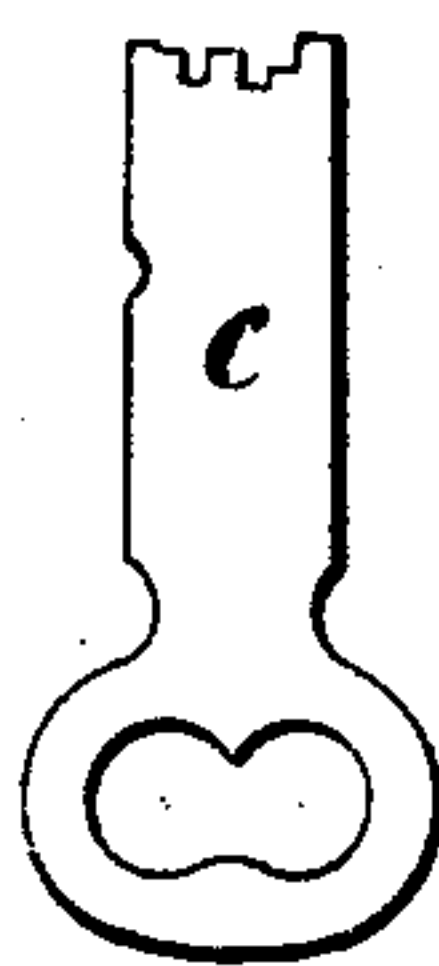


Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

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PADLOCK.

SPECIFICATION forming part of Letters Patent No. 539,235, dated May 14, 1895.

Application filed October 30, 1893. Serial No. 489,494. (No model.)

To all whom it may concern:

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

Figure 1, a view in side elevation of one form which a padlock constructed in accordance with my invention may assume; Fig. 2, a view of the lock with the cap of its case removed, showing its elements in their locked positions; Fig. 3, a similar view showing the elements of the lock in their unlocked positions; Fig. 4, a view in end elevation showing the bottom of the case; Fig. 5, a view of the lock in vertical central section on the line xx of Fig. 2; Fig. 6, a detached view of the key.

My invention relates to an improvement in that class of padlocks in which a flat end-cut key is inserted into the bottom of the case, and operated by a thrust, the object being to produce a simple, comparatively inexpensive, reliable and convenient padlock of the character described, having a capacity for a great range of combinations.

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

In carrying out my invention, as herein shown, I have represented the padlock as having a case A, shackle B, and end-cut key C, of ordinary construction, the case being provided in the middle of its lower edge with a transverse key-hole A'. As herein shown, the lock is furnished with three pivotal tumblers D, D' and D², arranged to turn on a tumbler-stud E, located about in line with the stud B' of the shackle. These tumblers respectively co-operate with three pivotal bolts F, F', F², arranged to turn on a bolt-stud G, located substantially below the free end of the shackle with which they co-operate. The lower or inner ends of the pivotal tumblers

and of the pivotal bolts, extend toward and beyond each other over the key-hole A', in alternating arrangement, as clearly shown in Fig. 5, so that the bits of the end-cut key C, will simultaneously co-operate directly with the bolts, as well as with the tumblers.

Each bolt is provided near its extreme inner end with a short racking-stump f , located upon its upper face, and arranged to enter the locking notch d , and the racking slot d' formed in the lower edge of its corresponding tumbler. When the stump is entered into the said locking-notch, the tumbler acts to lock the bolt in its closed position, while on the other hand the entrance of the stump into the racking-notch or slot d' enables the bolt to be turned on its pivot, and thrown into its open position.

It will be understood, of course; that it requires the thrusting of the key against the bolts and tumblers to re-arrange them, and swing them on their studs so as to disengage the stumps of the bolts from the locking notches of the tumblers, and force the said stumps into the racking slots, whereby the bolts are turned on their pivotal center, and their upper ends thrown outward and disengaged from the shackle. Each tumbler, I may remark, is provided with a light spring H, for holding it in its locked position, while each bolt is provided with a corresponding spring H' for the same purpose. As herein shown, these springs are secured to the respective tumblers and bolts, and engaged at their outer ends with pins h h , suitably placed in the lock-case A.

Above and between the bolts and tumblers I locate the shackle spring I, which as shown consists of a strip of sheet-metal, bent into the required form, engaged at its inner ends with posts i and i' mounted in the case A, and engaged at its outer end with the outer end of the shackle so that when the bolts are thrown open, this spring at once operates to move the free end of the shackle away from them, and out of the case. When the bolts are in their locked positions, the outer end of this spring enters notches f' formed upon their inner edges near their upper ends, and when they are thrown into their open positions, it engages with the hooks f^2 formed at

their upper ends for co operation with the notch *b* formed in the end of the shackle. In this last mentioned position of the shackle-spring, it has the function of holding the locking-bolts in their open positions against the tension of their locking springs *H'*, and so that the shackle may be re-engaged with them, which could not be effected if the bolts were allowed to move into their locked positions just as soon as the shackle was withdrawn from the case.

By arranging the bolts and tumblers so that both are operated upon directly by the key, I secure a lock of a very great range of change in its combinations, as well as one that is difficult to pick. My improved construction is also simple and not liable to derangement.

The lock herein shown has three tumblers and three bolts, and by preference I shall have a bolt for each tumbler, but obviously the number of bolts and tumblers may be changed, and if desired they may not be paired, although that arrangement will secure a greater capacity for changing the combinations of the lock than any other. I would therefore have it understood that I do not limit myself to the exact construction herein 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.

I am aware that a padlock having a pivotal bolt and a pivotal tumbler, the inner ends of which are extended beyond each other for simultaneous co-operation with a key, is old, and I do not claim that construction broadly.

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

In a padlock, the combination with the case and shackle thereof, of a pivotal bolt, a pivotal tumbler, the inner ends of the bolt and tumbler extending beyond each other for simultaneous co-operation with a key, and a spring located above and between the bolt and tumbler, and arranged to engage with the free end of the shackle for disengaging the same from the bolt, and to engage with the bolt for holding the same in its open position when the shackle is disengaged from it, substantially as set forth.

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

ALBERT A. PAGE.

Witnesses:

F. W. CORNELL,
CHARLES L. BALDWIN.