

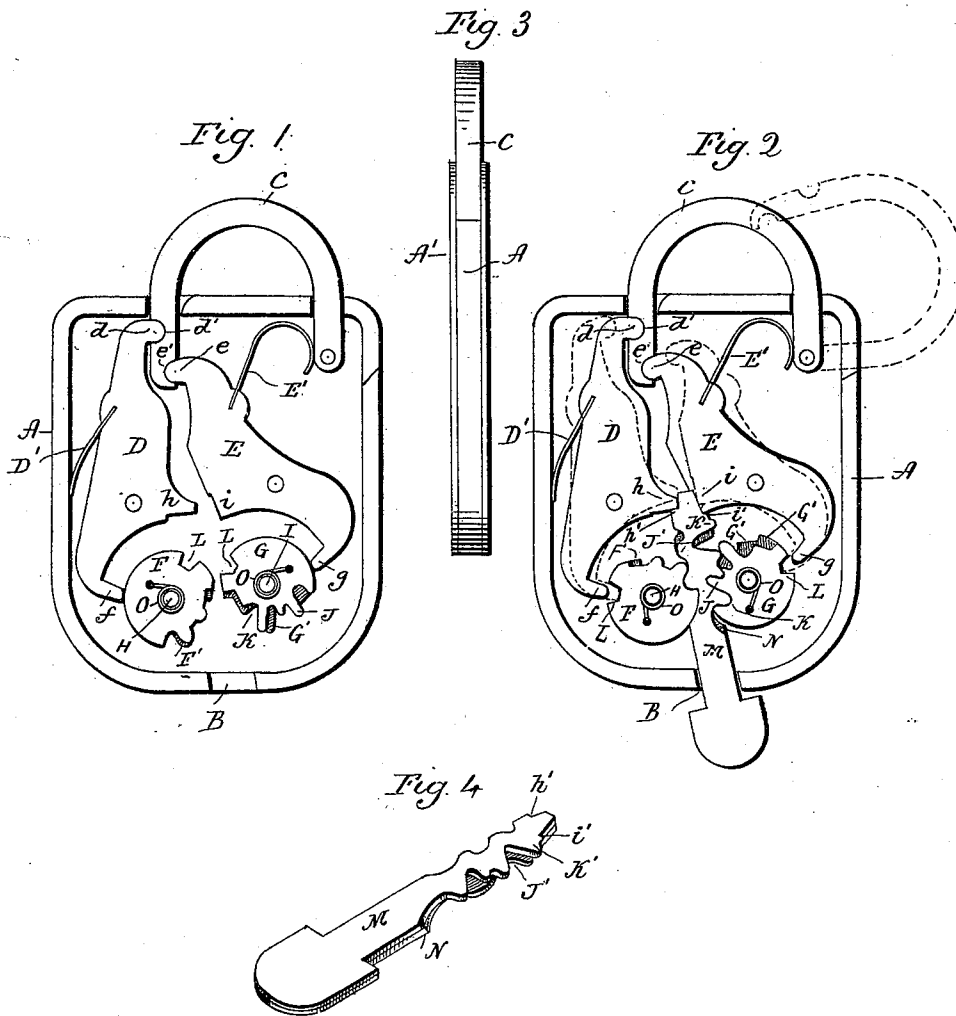
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Patented Jan. 31, 1899.

P. VAN CAUWENBERGHE.
PADLOCK.

(Application filed Sept. 12, 1898.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

PROSPER VAN CAUWENBERGHE, OF NEW HAVEN, CONNECTICUT.

PADLOCK.

SPECIFICATION forming part of Letters Patent No. 618,752, dated January 31, 1899.

Application filed September 12, 1898. Serial No. 690,736. (No model.)

To all whom it may concern:

Be it known that I, PROSPER VAN CAUWENBERGHE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Locks; 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 said drawings constitute part of this specification, and represent, in—

Figure 1, a face view of a padlock embodying my invention with the cap removed and the parts in the locked position; Fig. 2, a similar view with the key partially inserted and illustrating the operation of the parts; Fig. 3, a side view of the padlock complete; Fig. 4, a perspective view of the key.

This invention relates to an improvement in locks, and particularly to that class in which the tumblers are operated by an inward thrust of the key in contradistinction to locks which are operated by the rotation of the key, the object of the invention being to produce at a low cost for manufacture a lock extremely difficult or impossible to pick.

With this end in view the invention consists in the construction as hereinafter described, and particularly recited in the claims.

For convenience of illustration and description of my invention I have shown a padlock; but it is apparent that the invention is equally applicable to other classes of locks.

The case A may be of any desired shape, closed by a cap A', and provided with a keyway B, preferably at its lower end and having a shackle C pivotally connected at the upper end in the usual manner, and so that the free end of the shackle when in the closed position will project into the case. Within the case are two pivotally-mounted levers D E, formed at their upper ends, respectively, with noses *d e*, which are thrown toward each other by springs D' E'. These noses are adapted to enter notches *d' e'*, formed on opposite sides of the free end of the shackle C and at their lower ends with fingers *f g* for the purpose as will hereinafter appear. They are also formed with shoulders *h i*, which may vary in length, for engagement by the end of the key, whereby the upper ends of the levers are thrown out of engagement with the shackle. Below the

levers and on opposite sides of the line of the keyway circular tumblers are arranged, and these consist of disks F F' and G G', mounted on studs H I, so as to rotate thereon, and formed at their outer peripheries with projections J and notches K, differentiated in length and depth and from the notches and projections in the adjacent disks. These disks are also formed with unlocking-notches L, which may be turned so as to stand in the path of movement of the fingers *g f*, and so that the said levers may be turned to permit their upper ends to disengage the shackle, but which will ride upon the peripheries of the disks when in their normal position, and so that the levers are held against movement. The key for this lock is composed of as many members as there are pairs of disks, and, as herein shown, is composed of two, M and N. The opposite edges of these members are formed with notches J' and projections K', corresponding to the respective projections and notches in the disks, and near their outer ends with shoulders *h' i'*, which are adapted to engage with the shoulders *h i* of the levers, whereby the said levers are turned. The respective members of the keys are riveted or otherwise secured together, so as to form an integral key. Preferably springs O will be arranged in connection with the disks, tending to rotate them against the inward movement of the key, and so as to normally hold them in the locked position and as shown in Fig. 1. To open the lock, the key is inserted through the keyway B and between the sets of tumblers F G, the projections and notches J K of which register with the corresponding notches and projections in the key, and so that as the key is forced inward the disks are rotated to bring the notches L into line with the fingers *f g* of the levers D E, and so that as the key is forced still farther inward and the shoulders *h' i'* engaged with the shoulders *h i* of the levers the said levers may be turned and so as to force the fingers *f g* into the notches L and throw the noses *d e* out of the notches *d' e'* of the shackle C, which is thereby released. On the removal of the key the disks are returned and the levers permitted to attain their normal positions.

It is apparent that more than two tumbler-disks may be arranged on each side of the

keyway and a key having a corresponding number of members employed. These individual key members are readily formed by stamping or otherwise and secured together without difficulty, but owing to their irregularity make it extremely difficult to pick the lock.

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

1. A lock comprising a case, two locking-levers pivotally mounted therein and each formed at its lower end with an inwardly-projecting finger, tumbler-disks mounted in the said case between said fingers and on opposite sides of the keyway for rotation therein, each of said disks formed with differentially-arranged notches and projections, and with unlocking-notches into which the fingers of the locking-levers may fall, substantially as described.

2. A padlock comprising a case and a shackle pivotally mounted therein and formed at its free end with locking-notches, locking-levers pivotally mounted in the case adapted at their upper ends for engagement with said shackle, and formed at their lower ends with inwardly-projecting fingers and with intermediately-arranged shoulders, and tumbler-disks mounted in said case on opposite sides of the keyway for rotation therein, each of said disks formed with differentially-arranged notches and projections, and with unlocking-notches, substantially as described.

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

PROSPER VAN CAUWENBERGHE.

Witnesses:

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