(No Model.)

J. S. PEACOCK.

PADLOCK.

No. 456,427. Patented July 21, 1891.

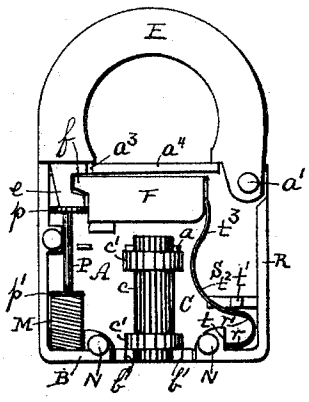

Fig. 1.

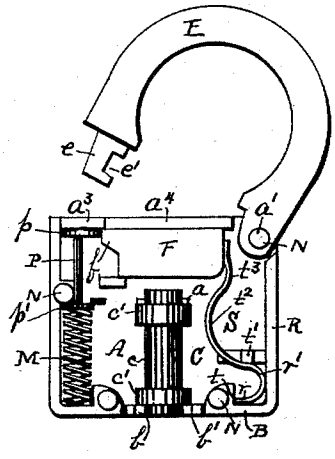

Fig. 2.

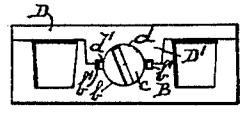

Fig. 3.

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UNITED STATES PATENT OFFICE.

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PADLOCK.

SPECIFICATION forming part of Letters Patent No. 456,427, dated July 21, 1891.

Application filed January 7, 1891. Serial No. 377,001. (No 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.

This invention relates to that class of locks known as "fast-shackle" padlocks, and is an improvement on a lock of the same class for which Letters Patent No. 453,136 were issued to me on May 26, 1891; and the objects of this improvement are, first, to construct the case in such manner as to facilitate and cheapen the formation of the opening in the case through which the key is inserted in the lock, and, second, to increase the efficiency of the mechanism for engaging the locking-bolt with the free end of the shackle when inserted in the case. I accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a face view of the lock with the closing-plate removed, the free end of the shackle being shown locked in the case, and Fig. 2 a similar view, but showing the free end of the shackle disengaged from the case. Fig. 3 is a view of the bottom of the lock-case with the closing-plate fastened thereto.

Similar letters indicate like parts throughout the several views.

Referring to the details of the drawings, A indicates the back of the case, and N posts adapted to be engaged by corresponding openings in the covering-plate and then riveted down to hold the parts together.

B is the bottom plate, having a depression formed in the center of its upper edge. In the center of the bottom of the said depression there is formed a semicircular recess b, having on each side a diametrical extension ending in shoulder b'. The closing-plate D is provided with a tongue D′, formed on the under side of its lower edge, adapted to fit the depression in the plate B. This tongue is also provided with a semicircular recess d and diametrical extensions d', which coincide with those in the bottom plate B, forming therewith a circular opening, in which rests the stem or barrel of a slotted key-guide G and passages for the wards of a flat key, as clearly shown in Fig. 3. If preferable, the said diametrical extensions need only be formed in one of the recesses, the circular portions thereof being made to conform therewith. The key-guide consists of a barrel c and bosses c'. One end of the barrel rests in the said circular opening and the other in a standard a, formed on the back of the case, the bosses bearing against the bottom plate B and adjacent face of the standard a to hold the key-guide in position horizontally. One end of the shackle E is pivoted at a' in a side of the upper end of the lock-case, and the other has a tongue e formed thereon adapted to be received in an opening a^3 in the opposite side of said upper end, the said tongue having a notch e' cut therein. A transversely-acting bolt F is located beneath the top plate a^4 of the case, on which is formed a tongue f, that engages the notch e' in the free end of the shackle when said end is forced into the case. The bolt F is actuated to engage the notch e' by a spring S. An end r of this spring abuts against a post t on one side of the depression of the bottom plate B. Thence said spring extends toward the adjacent side R of the case and bends inward therefrom with a curve r' to and against a post t', thence with a curve t^2 it bends toward the center and top of the case, and then with a reverse curve t^3 around the back of the bolt F, against which the upper end of the spring bears, as shown in Figs. 1 and 2. This position of the spring enables it to be made of any depth necessary to insure the required amount of strength, while the curves therein and the bearings afforded by the posts t t' and the side R of the case multiply the force exerted by the tension on the spring.

Beneath the opening a^3 in the top of the case there is a spring-actuated plunger-rod P, having a head p, that forces the free end of the shackle out of the case when the bolt F is disengaged therefrom, and a boss p', which serves as a bearing for the upper end of the spring M, the lower end of which rests on the bottom plate B. When the free end of the shackle is forced from the case the head p closes the opening a^3 against the entrance of dirt or other foreign matter, and at the same time prevents the bolt F from being thrown forward until the end of the shackle has been again pressed down into position to be locked.

The construction specified for forming the opening through which the key is introduced into the lock is of great importance, and is as applicable to locks in which a key-guide is not received into said opening, or is not used, as it is in the lock herein described. In locks as ordinarily constructed the key-opening has to be drilled, filed, and reamed out—an operation entailing much time and expense. In my mode of constructing this opening the case and the closing-plate are cast with the several parts of such configuration that upon joining those parts the said key-opening is completely formed without further labor, saving any additional cost whatever in the making of the lock.

I do not limit myself to any particular construction of the depression or recess formed in the upper edge of the bottom plate, neither do I restrict myself to any form of key-hole formed between the edges of said recess and those of the tongue on the closing-plate.

My invention effects an entire change in the manner of constructing the key-hole of a lock, and consists, broadly, in the forming of said key-hole by casting a recess in the free edge of one of the walls of the case and a tongue on the closing-plate adapted to enter said recess and form a key-hole.

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 a case having a depression formed in the free edge of one of its walls and a recess formed in said depression, of a closing-plate having a tongue constructed to enter said depression, the said tongue having a recess formed in its edge adapted to register with the recess in the depression and form a key-opening, substantially as and for the purpose specified.

2. In a padlock, the combination, with a case having a depression in the free edge of one of its walls, of a closing-plate provided with a tongue adapted to enter said depression, the parts being constructed to form an opening between the edges of the said depressions and tongue for the passage of the key, substantially as and for the purpose specified.

3. In a padlock, the combination, with one of the walls of the case having a depression in its free edge and a recess formed in said depression with extensions on the sides of the mouth thereof, of a closing-plate provided with a tongue constructed to close the depression and having a recess formed in its edge similar to that in said depression and adapted to register therewith, substantially as and for the purpose specified.

4. In a padlock, the combination, with the shackle and the transversely-acting bolt, of a spring, as S′, a post *t*, located at the end of the case opposite the bolt and forming an abutment for one end of the spring, and a post *t′*, set in from the side of the lock between the post *t* and the bolt, the spring extending from the post *t* to the side of the lock on which the post *t′* is located, then bending inward with a curve to and against said post *t′*, thence extending with a curve toward the center and top of the case and then with a reverse curve to the back of the bolt, substantially as and for the purpose specified.

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