

# PATENT SPECIFICATION



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145,211

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## PROVISIONAL SPECIFICATION.

### Improvements in Padlocks.

We, SIDNEY BAKER, of No. 3, Court, Lower Horseley Fields, Wolverhampton, in the County of Stafford, Locksmith, and WILLIAM BUCKNALL, of 6, Cemetery Road South, Willenhall, in the said County, Locksmith, do hereby declare the nature of this invention to be as follows:—

This invention relates to padlocks of the type in which the shackle is spring pressed in a direction to cause it to open when freed from the locking bolt, and in which the locking bolt is spring pressed in a direction to maintain it normally in its locking position. Such padlocks are locked by pressing in the shackle when a notch therein, by engagement with the end of the bolt, causes the padlock to be automatically locked. The unlocking is effected by pressing back the bolt by the key, when the shackle flies open under the action of its spring.

Heretofore the shackle has been pressed by a separate spring from that which presses out the locking bolt, and this invention consists, as to its main feature, in the employment of a single spring to effect both movements.

According to the preferred form of the invention, the spring is formed as a wire

spring having one free end pressing 45 against a shoulder on the bolt, and the other against a shoulder on the inner or pivot end of the shackle. The spring is coiled around a stump of the lock case positioned above the bolt and passing 50 from thence is coiled around the stud upon which the shackle is pivoted, or around a sleeve or annulus of the shackle which is concentric with the pivot thereof, and the free end extending from the 55 latter coil presses against the said shoulder of the shackle. The spring is coiled around the stump of the case in such a direction as to cause the bolt to be pressed outward by the free end, and 60 is coiled around the shackle pivot in a direction to cause the other free end to press the shackle open.

Preferably the coil around the pivot of the shackle lies in a concentric recess in 65 the shackle, whereby it is hidden from view from the outside of the lock case.

Dated this 5th day of May, 1919.

STEPHEN WATKINS, SON &  
GROVES,

Chartered Patent Agents,  
Metropolitan Chambers, Wolverhampton,  
Agents for the Applicants.

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## COMPLETE SPECIFICATION.

### Improvements in Padlocks.

We, SIDNEY BAKER, of No. 3 Court, Lower Horseley Fields, Wolverhampton, in the County of Stafford, Locksmith, and 35 WILLIAM BUCKNALL, of 6, Cemetery Road South, Willenhall, in the said County, Locksmith, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and 40 by the following statement:—

This invention relates to padlocks of the type in which a single spring serves the double purpose of pressing against an

abutment of the shackle to press it in a direction to cause it to open when freed 75 from the locking bolt, and of pressing against an abutment of the locking bolt to press it in a direction to maintain it normally in its locking position. Such padlocks are locked by pressing in the 80 shackle when a notch therein, by engagement with the end of the bolt, causes the padlock to be automatically locked. The unlocking is effected by pressing back the bolt by the key, when the shackle flies 85 open under the action of its spring.

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According to this the invention, the spring is passed around two stumps, or equivalent members of the lock and has one free end pressing against an abutment on the bolt, and the other against an abutment on the inner or pivot end of the shackle, and according to a preferred arrangement, the spring is formed as a wire spring coiled around a stump of the lock case positioned above the bolt and passing from thence is coiled around the stud upon which the shackle is pivoted, or around a sleeve or annulus of the shackle which is concentric with the pivot thereof, and the free end extending from the latter coil presses against the said abutment of the shackle. The spring is coiled around the stump of the case in such a direction as to cause the bolt to be pressed outward by the one free end, and is coiled around the shackle pivot in a direction to cause the other free end to press the shackle open.

Preferably the coil around the pivot of the shackle lies in a concentric recess in the shackle, whereby it is hidden from view from the outside of the lock case.

In order that the invention may be clearly understood we will now describe the same by reference to the drawings herewith, of which:—

Figure 1 is a front view of a padlock with the cap plate removed, and having the spring arranged according to this invention. In this figure the shackle is shown in its locked position.

Figure 2 is a view corresponding to Figure 1, but showing the lock with the shackle in its open position; and,

Figure 3 is a vertical section of the padlock, the section being taken in the plane indicated by the line 3 3 of Figure 1, and looking in the direction of the direction of the arrow of that figure.

The padlock casing A has slidably mounted therein a bolt B having a catch piece *b* which has a slanted upper surface and engages with a notch *c* of the shackle C. The inner side of the outer end of the shackle has a slanted face *c*<sup>1</sup> which by engagement with the slanted face of the catch-piece allows of its being snapped into engagement therewith. D is a wire spring which bears at one of its free ends against a stump *b*<sup>1</sup> formed on the face of the bolt, and is coiled around a stump E of the lock case as shown, passing from thence to the stump E<sup>1</sup> which forms the pivot axis of the shackle. The spring is also coiled around the

stump E<sup>1</sup>, its free end bearing against an abutment *c*<sup>2</sup> of the shackle tending to press the latter in a direction to cause the shackle to open. The coils of the spring which lie around the stump E<sup>1</sup> are placed in a recess *c*<sup>3</sup> of the shackle, and this recess is open at its lower side. This construction has the advantage that the lower edge of the inner wall forms the abutment *c*<sup>2</sup> for the spring, while the outer wall prevents the spring and stump E<sup>1</sup> from being visible from the outside of the case.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. In a padlock of the type set forth, the spring arranged to pass around two mounting or supporting stumps or equivalent members which are spaced apart and to bear at one of its free ends against an abutment of the bolt and at the other free end against an abutment of the shackle.
2. In a padlock as claimed in Claim 1, said spring formed as a wire spring coiled around two stumps or equivalent members of the lock.
3. In a padlock as claimed in Claim 1 or in Claim 2, said spring coiled around a stump of the case which is above the bolt and passing from thence to a second stump around which it is coiled.
4. In a padlock as claimed in any of the preceding claims, one of the stumps, around which the spring is coiled, serving as the pivot centre of the shackle.
5. In a padlock as claimed in Claim 4, an annular recess in the shackle disposed around the pivot centre thereof and within which the coils of the spring lie.
6. In a padlock as claimed in Claim 5, the said annular recess having a cut-away portion to allow the spring to enter, and the extremity of the inner wall thereof serving as the abutment of the shackle against which one of the free arms of the spring bears.
7. A padlock constructed substantially as described with reference to the drawings herewith.

Dated this 25th day of September, 1919.

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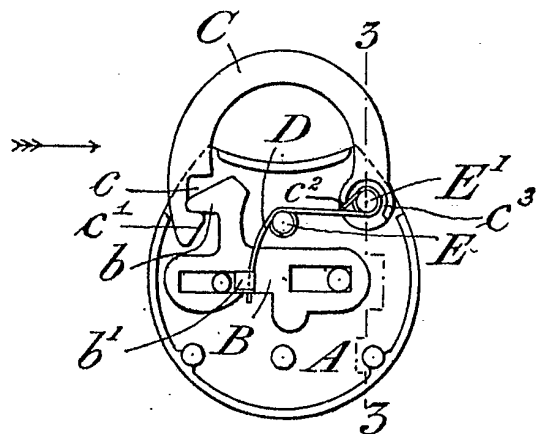


Fig. 1.

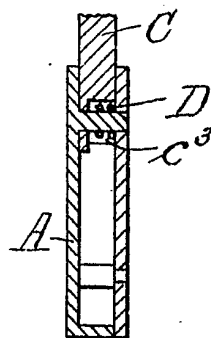


Fig. 3.

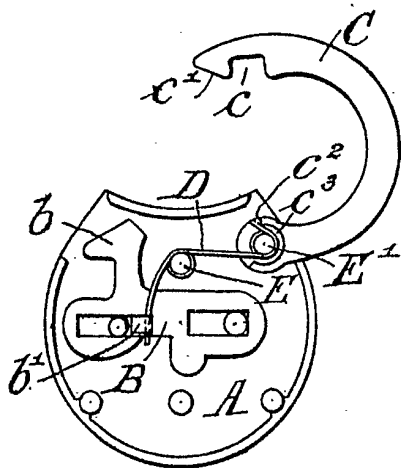


Fig. 2.

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**145,211. Baker, S., and Bucknall, W.**  
May 6, 1919.

*Padlocks.*—A single spring *D* is passed round two stumps or equivalent parts, and its free ends press upon suitable abutments so as both to hold the bolt *B* in engagement with the shackle *C* in the

locked position, and also to throw out the latter when released. The spring is preferably taken round a stump *E* placed above the bolt, and also coiled upon a pin or sleeve *E*<sup>1</sup> which may form or surround the shackle pivot, so that the end *c*<sup>2</sup> lies in a recess *c*<sup>3</sup>, one edge of which forms the heel upon which the spring acts.

