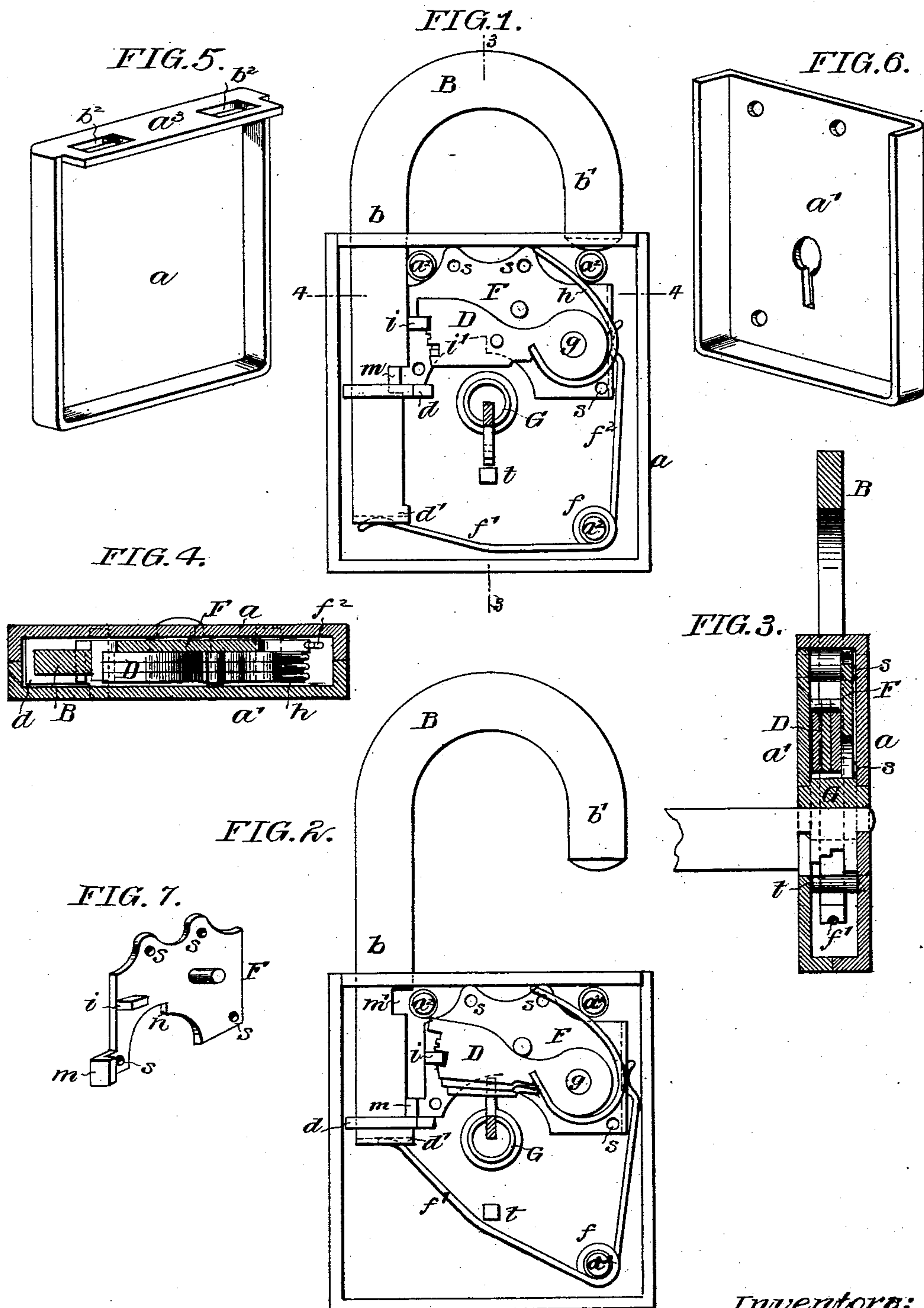


(No Model.)

M. JACKSON & A. TAYLOR.
PADLOCK.

No. 572,115.

Patented Dec. 1, 1896.



Witnesses:
Ernest Hafen
Will A. Barr.

Inventors:
Milton Jackson
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by their Attorneys
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UNITED STATES PATENT OFFICE.

MILTON JACKSON AND ALBERT TAYLOR, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO THE D. K. MILLER LOCK COMPANY, OF SAME PLACE.

PADLOCK.

SPECIFICATION forming part of Letters Patent No. 572,115, dated December 1, 1896.

Application filed July 1, 1895. Serial No. 554,629. (No model.)

To all whom it may concern:

Be it known that we, MILTON JACKSON and ALBERT TAYLOR, citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Padlocks, of which the following is a specification.

The object of our invention is to construct a cheap and simple form of automatic padlock, that is to say, a padlock in which the shackle is automatically projected as soon as unlocked, and is automatically engaged and held when again pushed inward. This object we attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal section of a padlock constructed in accordance with our invention, showing the same locked. Fig. 2 is a similar view showing the lock open. Fig. 3 is a transverse section of the lock on the line 3 3, Fig. 1. Fig. 4 is a sectional plan view on the line 4 4, Fig. 1. Figs. 5 and 6 are perspective views of the two parts of the lock-case, and Fig. 7 is a perspective view of part of the locking mechanism.

The casing of the lock is constructed of two halves a a' , each struck up from sheet metal and held together by suitable transverse pins or rivets a^2 , the edges of the two halves of the case meeting centrally at the bottom and sides of the lock, as shown in Figs. 3 and 4, but the top plate a^3 of the casing being formed wholly upon the half a , so that the shackle-openings will be formed in a single plate.

The shackle B of the lock has a long leg b , guided in an opening in the top plate a^3 of the casing and in a projection d within the lock, the short leg b' of the shackle being adapted to enter an opening b^2 in the top plate a^3 of the casing when the lock is closed.

The shackle is projected by one arm f' of a spring f , which is coiled around one of the rivets a^2 of the case, a suitable lug d' upon the leg b of the shackle serving, by contact with the guide-lug d , to limit the extent of projection of said shackle under the action of the spring-arm f' .

To a pin g within the casing are hung a series of tumblers D, which are normally depressed by means of springs h , and between

these tumblers and one side of the lock is interposed a locking-plate F, which has a fence i for entering the notches i' of the tumblers when the latter have been brought into line by the action of the key, said locking-plate also having a stump m , which is adapted to enter a notch m' in the long leg b of the shackle, so as to retain the latter in the depressed position, the locking-plate being so moved by an arm f^2 of the spring f as to cause its stump to normally engage with said notch in the shackle. On the locking-plate, however, is a shoulder n for engagement with one of the bits of the key, and when said key has been turned so as to bring the notches of all of the tumblers into line with the fence i further movement of the key will cause the rearward sliding movement of the plate F, so as to carry its fence into the notches of the tumblers and withdraw its stump m from engagement with the notch m' of the shackle, thereby permitting the projection of the latter by the spring-arm f' , as shown in Fig. 2.

To lessen the friction caused by the back-and-forth movement of the plate F, the latter has struck up from it a series of lugs or teats s , which bear against the back of the case and serve as bearings for the plate thereon.

In order to relock the shackle, it is only necessary to press the same inward until the end of its short leg b' enters the opening b^2 in the top of the casing, the recess m' being then in line with the stump m of the locking-plate, so that the latter is at once projected by the spring-arm f^2 , and the fence i is withdrawn from the notches of the tumblers, thereby permitting the restoration of the latter by the springs h to the normal or locked position, as shown in Fig. 1.

A stud t extends across the case from the back plate to the front plate some distance below the key-hub G, which is slotted, as usual, for the entrance of an ordinary flat key, and is reduced in diameter at each end so as to turn in bearings in the front and back of the casing, the stud t serving as a bearing for the bits of the key as the latter is introduced into the hub and insuring the straight or parallel movement of the key.

The case, shackle, tumblers, locking-plate, and guide-lug of our improved lock can all

be readily punched from sheet metal, so that the lock can be made at small cost, while at the same time it is extremely strong and compact.

5 Having thus described our invention, we claim and desire to secure by Letters Patent—

10 1. A padlock-casing comprising front and rear halves each consisting of a plate of sheet metal struck up so as to form edge flanges which at the sides and bottom of the casing meet at about the transverse center of the same, the top plate being formed wholly upon one-half of the casing, substantially as specified.
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2. The combination of the casing, with the sliding shackle, the spring for projecting the same, the pivoted tumblers having notches in their outer edges and the sliding locking-plate having a fence for entering the notches
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in the tumblers, and a stump for engaging with a notch in the shackle, said locking-plate being moved in one direction by a spring, and in the opposite direction by the key, substantially as specified. 25

3. The combination of the lock-casing, the shackle, the pivoted tumblers, the sliding locking-plate, the key-hub mounted in the casing and a key-guiding stud extending across the casing below said key-hub, and 30 parallel with the slot therein, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

MILTON JACKSON.
ALBERT TAYLOR.

Witnesses:

GEORGE L. BATTERSBY,
JULIA TAYLOR.