No. 647,359. Patented Apr. 10, 1900.

J. BALM.

PADLOCK.

(Application filed Feb. 12, 1900.)

(No Model.)

Fig. 1.

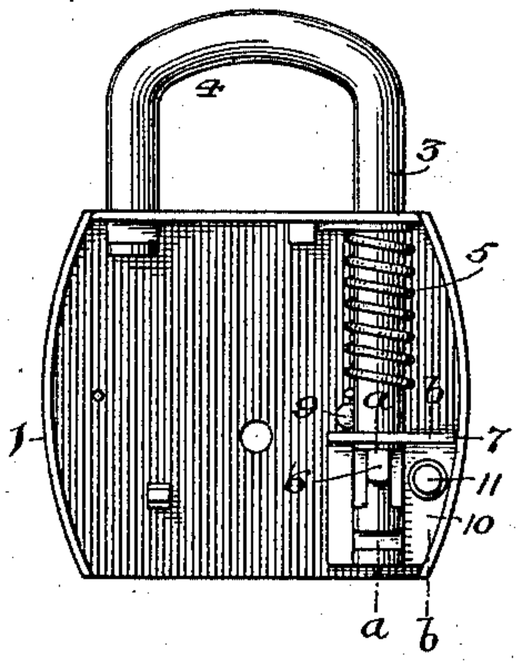

Fig. 2.

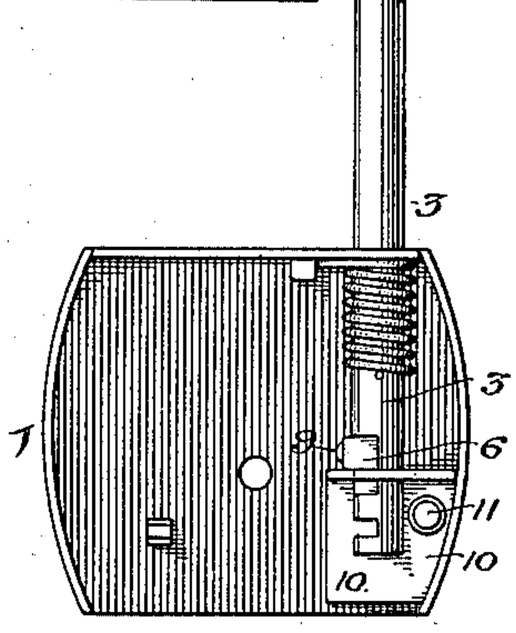

Fig. 3.

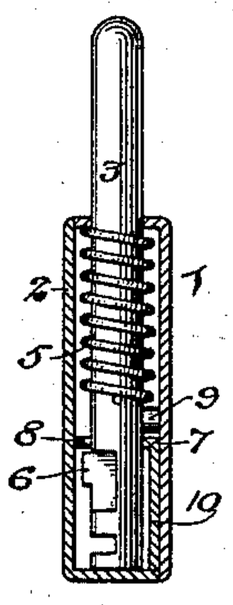

Fig. 4.

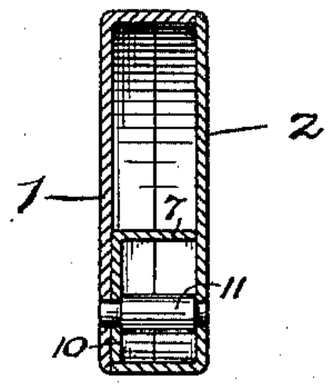

Fig. 6.

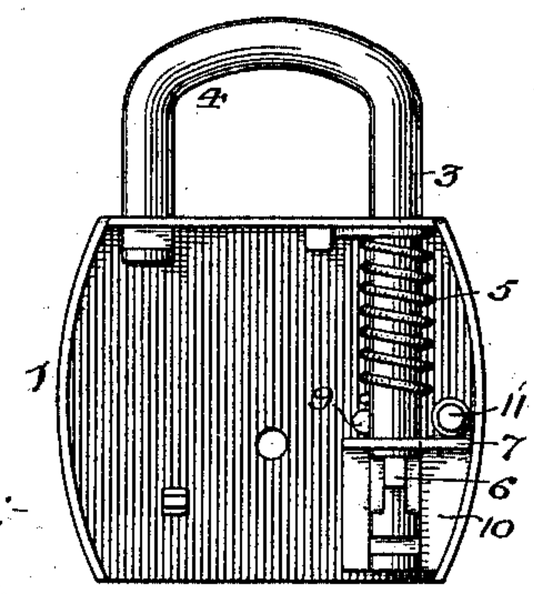

Fig. 5.

Witnesses:-
Charles W. Coe,
Louis M. T. Whitehead

Inventor:-
James Balm.
by his Attorneys:
Howson & Howson

UNITED STATES PATENT OFFICE.

JAMES BALM, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE MILLER LOCK COMPANY, OF SAME PLACE.

PADLOCK.

SPECIFICATION forming part of Letters Patent No. 647,359, dated April 10, 1900.

Application filed February 12, 1900. Serial No. 4,921. (No model.)

To all whom it may concern:

Be it known that I, JAMES BALM, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Padlocks, of which the following is a specification.

My invention relates to that class of padlocks in which the shackle has both a sliding and a swinging movement and is held in a projected position by engagement of a lug on the stem of the shackle with a bearing-plate on the inside of the lock.

The object of my invention is to so construct this bearing-plate that it will be stronger than usual and can be secured in position without passing any portion of the same through openings in the shell or casing of the lock and riveting them on the outside of said casing.

In the accompanying drawings, Figure 1 is an elevation of sufficient of a padlock of the character to which my invention relates to illustrate my present invention, one-half of the lock-casing being removed and the shackle being shown in the retracted or locked position. Fig. 2 is a similar view showing the shackle in the projected or unlocked position. Fig. 3 is a view, partly in elevation and partly in transverse section, on the line *a a*, Fig. 1, and showing both parts of the lock-casing. Fig. 4 is a section on the line *b b*, Fig. 1. Fig. 5 is a perspective view of that portion of the lock to which my invention particularly relates; and Fig. 6 is a view of part of the lock, illustrating a modification.

The two parts of the lock-casing are represented at 1 and 2 in Figs. 3 and 4, the top of the portion 1 of the casing having an opening for the reception and guidance of the stem 3 of the shackle 4 and another opening for the reception of the other end of said shackle, which is notched for engagement with the usual locking-bolt within the case, none of the locking mechanism being shown in the drawings, as my invention has no reference to this portion of the lock.

The stem 3 of the shackle is acted upon by a spring 5, which tends both to turn said stem and to press it inwardly, and on the stem of the shackle is a projecting lug 6, which when the shackle is retracted, as shown in Fig. 1, occupies a position below a plate 7 contained in the lock-case, said plate having an opening for the reception of the stem 3 of the shackle and a slot 8, through which the lug can pass as the shackle is projected. Hence when the full extent of projection of the shackle has been reached and the same has been turned by the action of the spring 5 until the lug 6 strikes a stop-pin 9 in the casing said lug will have a bearing upon the top of the plate 7, as shown in Fig. 2, so that the shackle cannot be again pushed inward until it has first been turned in order to bring its lug 6 into line with the slot 8 in the plate.

Usually the plate 7 is a flat piece of metal extending across the lock from the portion 1 to the portion 2 of the casing and having projecting lugs passing through openings in the casing and riveted down on the outer side of the same; but this method of construction is objectionable, because it necessitates expensive finishings of the outer portion of the case after these projecting portions of the bearing-plate have been riveted. Usually, also, the slot 8 is an open-ended slot, which materially detracts from the strength of said plate.

In order to overcome both of the objections noted, I provide the plate 7 with a flange 10 at right angles thereto, this flange bearing against the inner face of the casing-plate 1 of the lock and being confined between the same and the shoulder of one of the securing-studs 11, with which the lock is usually provided, these studs having end portions projecting beyond the casing-plates of the lock and riveted down on the outer side of the same. As these studs are usually of brass or other soft metal, the riveting of their ends upon the outer sides of the casing-plates of the lock does not mar the latter or necessitate any subsequent finishing of said casing-plates. I also form in the bearing-plate 7 a slot 8, which has closed ends, as shown in Figs. 3 and 5, instead of being an open slot, as usual, and by thus closing said slot and providing the plate 7 with the right-angled flange 10 I so increase the strength and rigidity of said plate 7 that the direct riveting of the same to the casing of the lock is rendered unnecessary, a confinement of the flange 10 between the casing-plate 1 and the shoulder of the securing-stud 11 being all that is required. In some cases even

this confinement of the flange 10 to the casing-plate 1 by the shouldered stud 11 may be omitted, the stud being located, as shown in Fig. 6, above the plate 7 so as to bear upon the top of the same and prevent any lifting movement or distortion of said plate, and the flange 10 being pressed firmly against the casing-plate 1 by reason of the bearing of the other casing-plate against the edge of the plate 7.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The combination of the casing-plates of a padlock and the shackle having a stem with projecting lug thereon, with the slotted plate forming a guide for said stem and a bearing for the lug when the stem is projected, said bearing-plate having a flange and means whereby said flange is held in contact with one of the casing-plates of the lock, whereby said flange serves to stiffen the bearing-plate and render unnecessary the riveting of the same to the casing-plate, substantially as specified.

2. The combination of the casing-plates of a padlock, and the shackle having a stem with projecting lug thereon, with a plate having a closed slot therein, a guide for said stem, and a bearing for the lug when the stem is projected, said bearing-plate having a flange and means whereby said flange is held in contact with one of the casing-plates of the lock, whereby said flange serves to stiffen the bearing-plate and render unnecessary the riveting of the same to the casing-plate, substantially as specified.

3. The combination of the casing-plates of the lock and the sliding and rotatable shackle-stem having a projecting lug, with the bearing-plate for the latter having a right-angled flange bearing against one of the casing-plates of the lock and a shouldered connecting-stud for the lock-casing whereby said flange is secured to the casing-plate, substantially as specified.

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

JAMES BALM.

Witnesses:
WILLIAM C. GREW,
CHARLES E. LEVER.