

No. 862,690.

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M. ACKERMAN.
PADLOCK.

APPLICATION FILED FEB. 20, 1907.

Fig. 1.

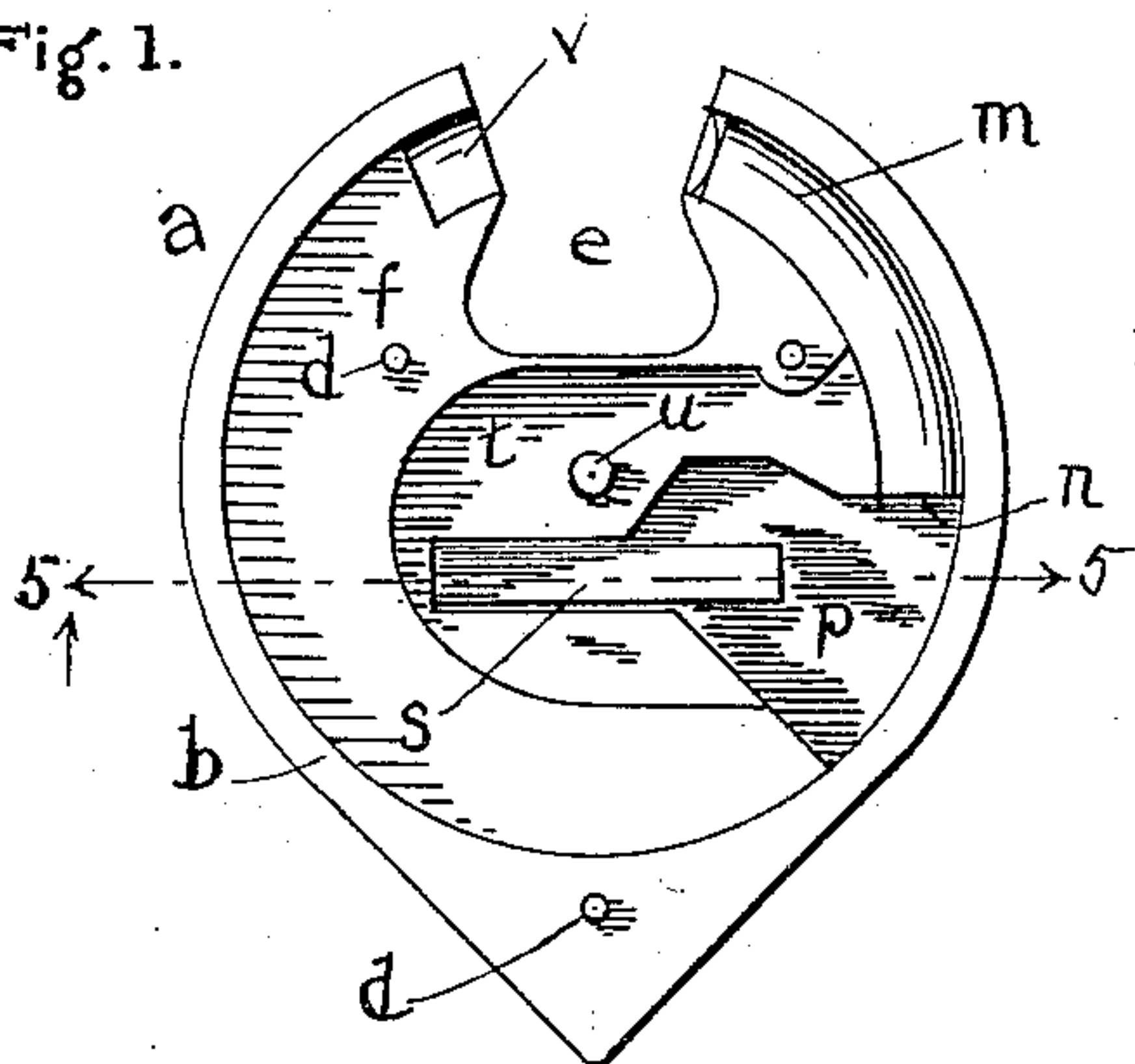


Fig. 2.

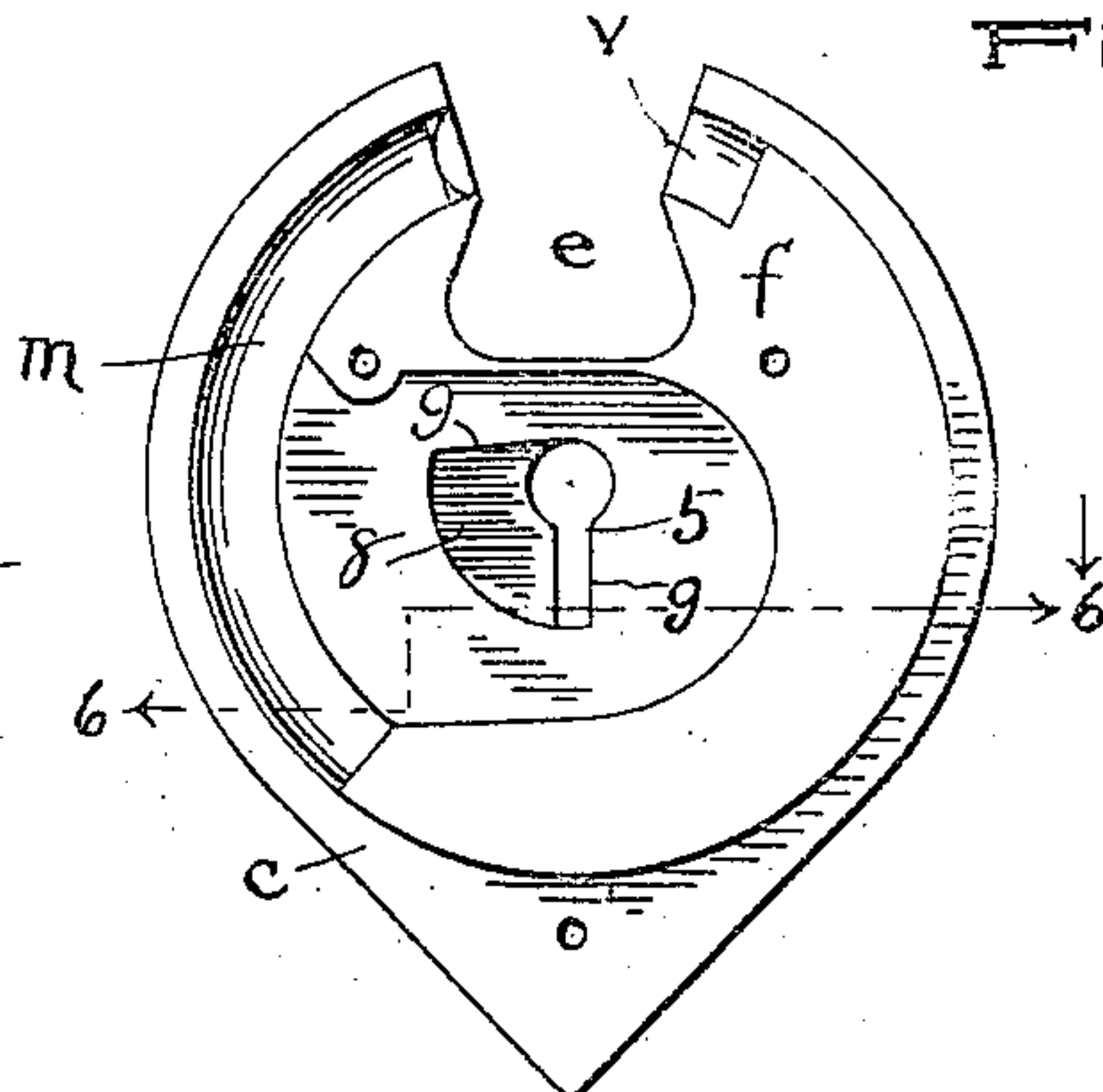


Fig. 5.

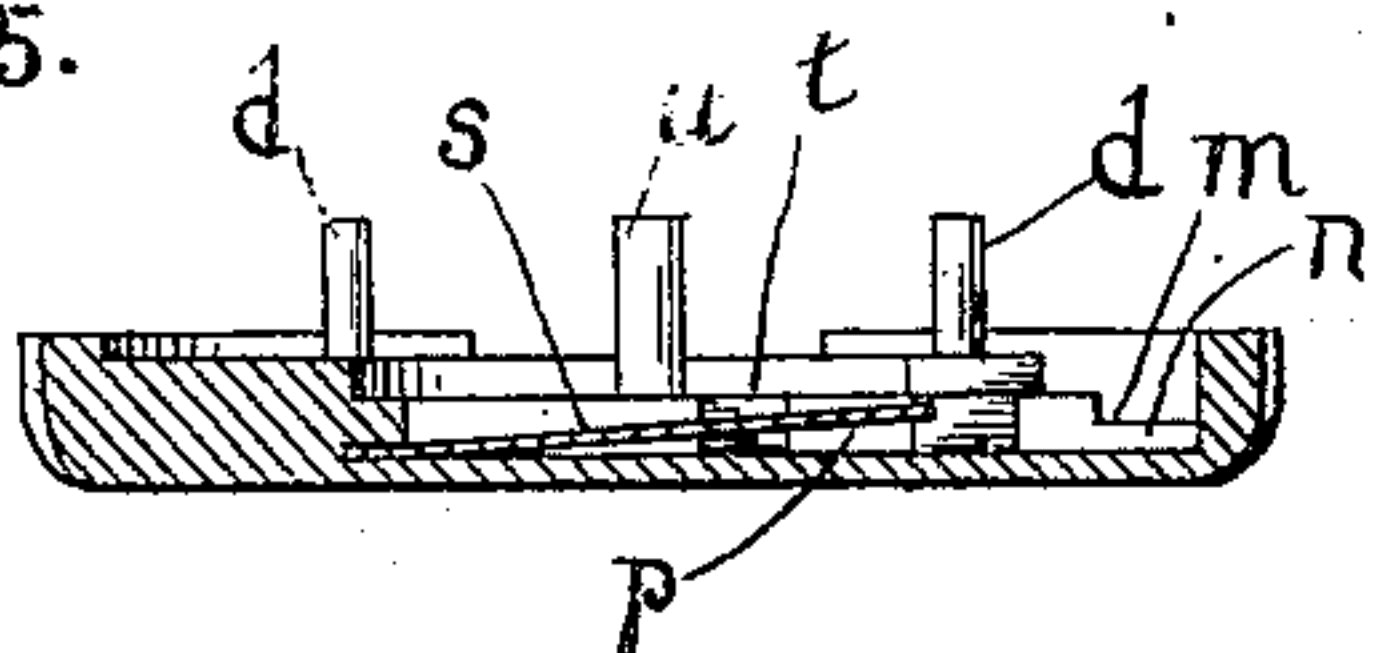


Fig. 6.

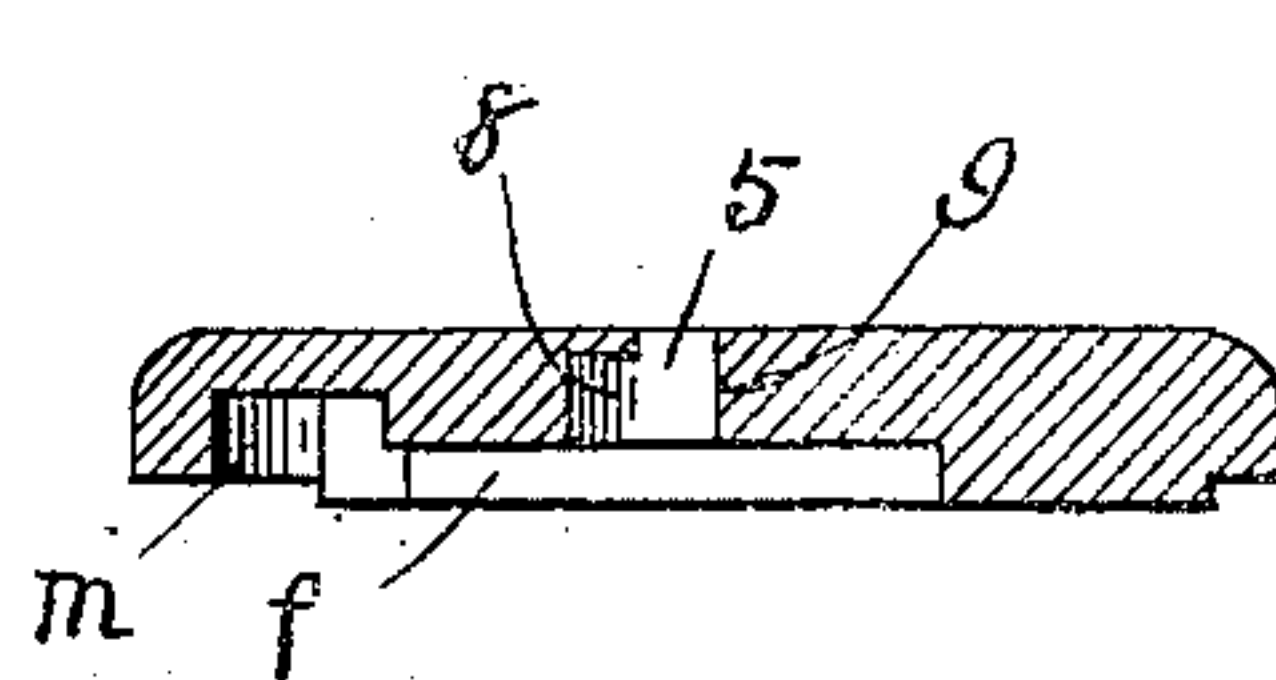


Fig. 3.

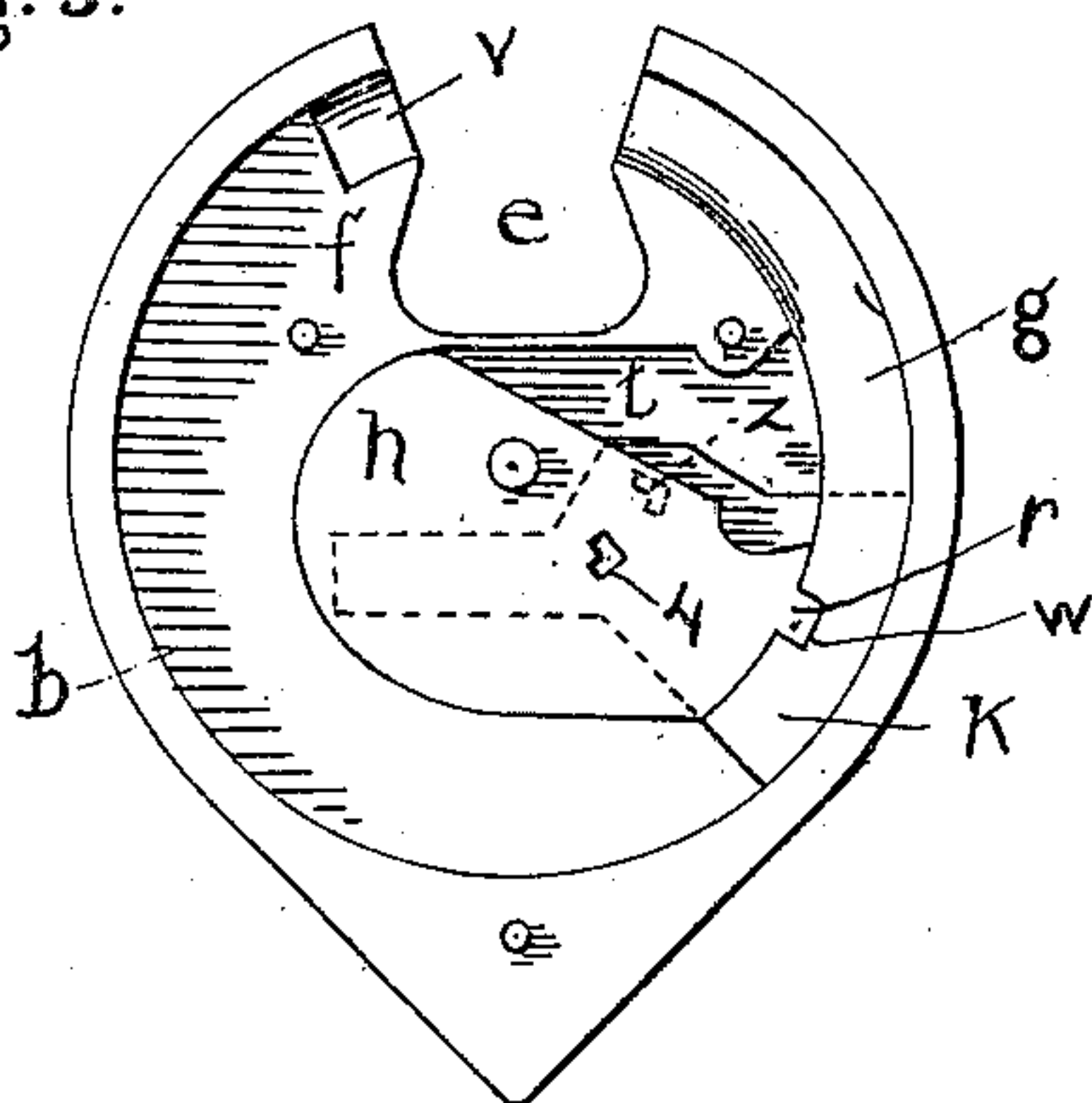


Fig. 4.

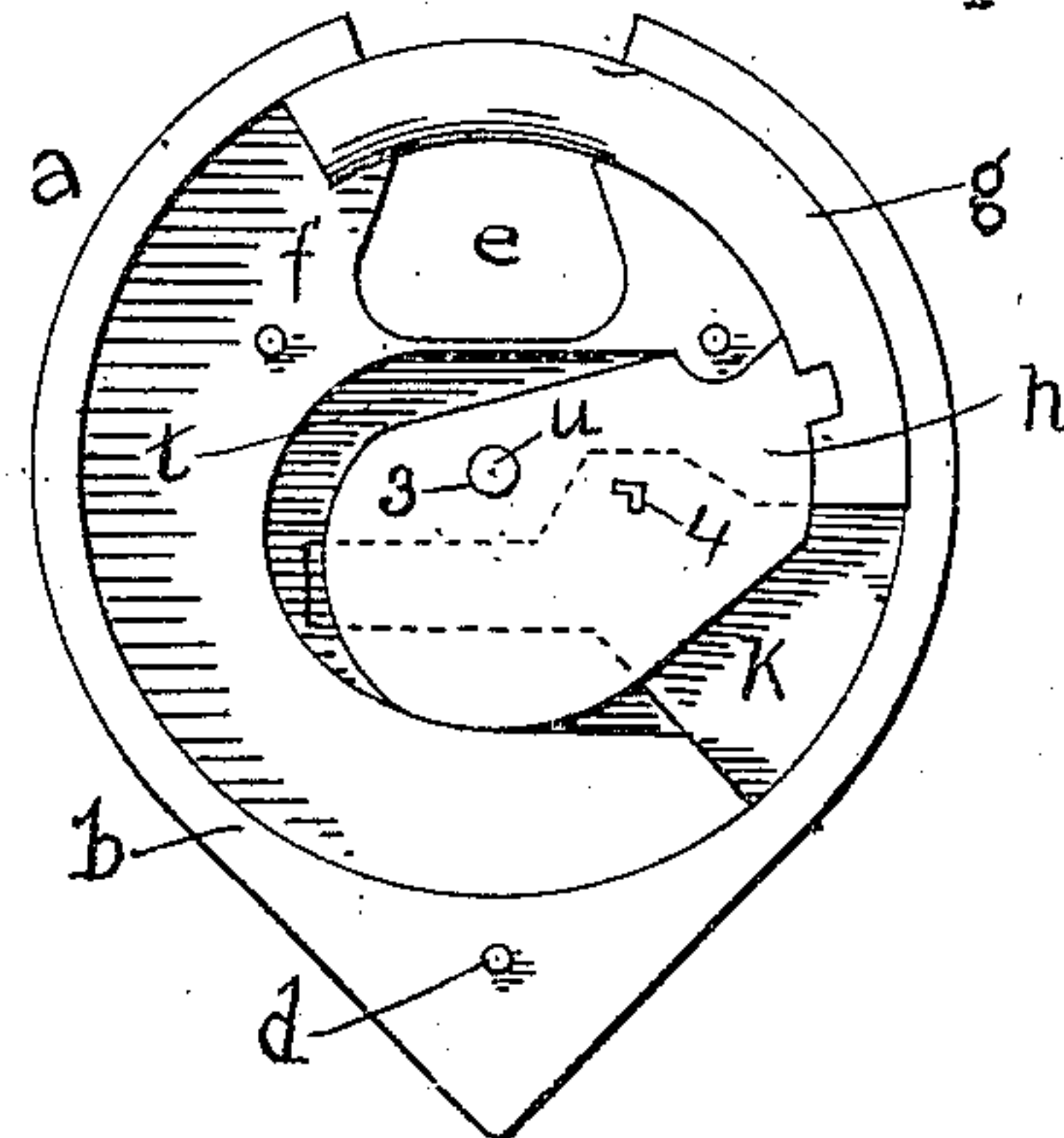


Fig. 7.

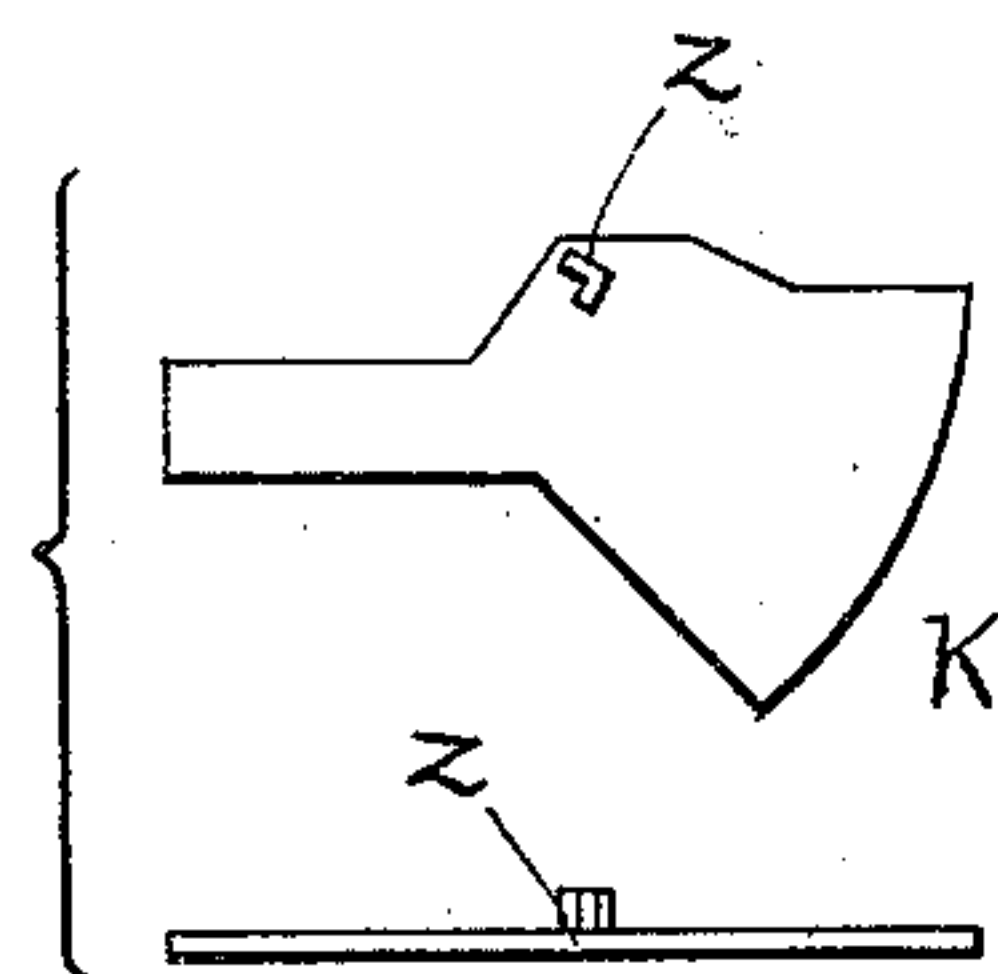
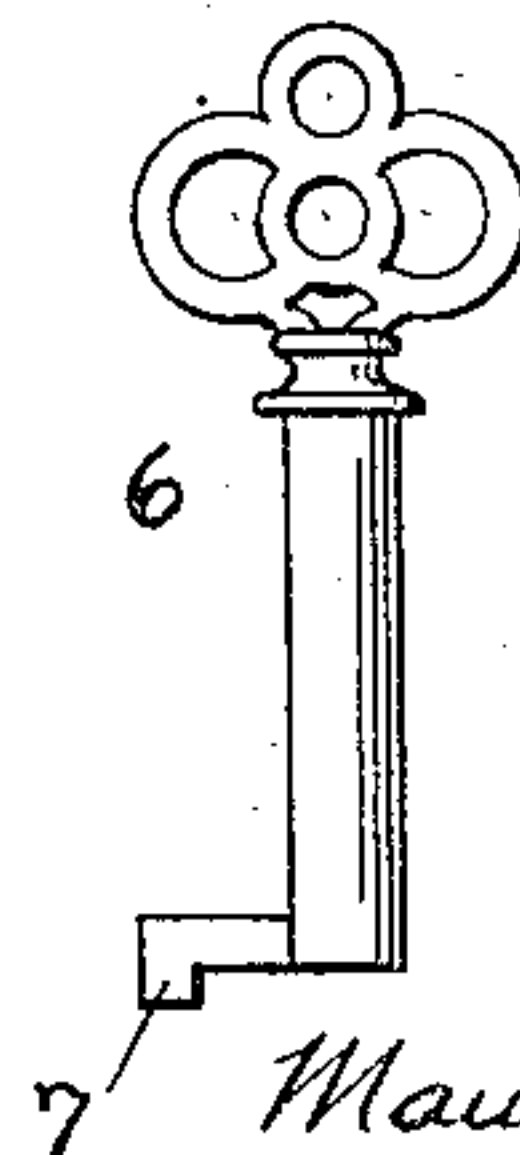


Fig. 8.



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UNITED STATES PATENT OFFICE.

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PADLOCK.

No. 862,690.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed February 20, 1907. Serial No. 358,371.

To all whom it may concern:

Be it known that I, MAURICE ACKERMAN, a citizen of the Dominion of Canada, and a resident of the city of Washington, in the county of Washington and District of Columbia, have made a certain new and useful Invention in Padlocks; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The invention has relation mainly to pad-locks, and it consists in the novel construction and combinations of parts, as hereinafter set forth.

The object of the invention is to provide a rotating shackle padlock of great strength and simple construction, which cannot be readily picked.

In the accompanying drawings, illustrating the invention, Figure 1 is a plan view of the rear section of the case; Fig. 2 is a similar view of the front section of the case; Fig. 3 is a plan view of the lock, with the front section of the case removed, and the bolt retracted; Fig. 4 is a similar view with the bolt thrown across the notch of the case; Fig. 5 is a section on the line 5—5, Fig. 1; Fig. 6 is a section on the line 6—6, Fig. 2; Fig. 7 shows the stop plate in detail; and Fig. 8 is a detail view of the key.

In these drawings the letter *a*, designates the case of the padlock, which is made in two sections *b*, and *c*, which are riveted together as indicated at *d*. This case is provided with an engagement notch *e*, in its circumference, said notch communicating with the chamber *f*, of the case. In this chamber is located a transverse arc-form rotating shackle *g*, an operating plate *h*, and a yielding stop plate *k*.

The chamber of the case, in its back or rear portion, is provided with a circumferential arc-form slide way *m*, terminating in a shoulder *n*, forming part of the wall of a deeper depression *p*, in which is seated the spring-actuated stop plate *k*. Usually this plate fits this depression neatly, but in such a manner that it can be depressed therein, said plate being supported on a weak spring *s*.

Above the level of the bottom of the depression *p*, and above that of the bottom of the slideway *m*, is the bearing step or plane *t*, in which lies the operating plate *h*, said plane including the center of the padlock, from which rises the key post *u*. The padlock case is also provided with a catch recess *v*, in arcuate alinement with the slide way, and opening into the notch *e* of the case.

The spring-actuated plate *k*, which corresponds to its depression *p*, in contour, and has a yielding move-

ment therein governed by its spring and the depth of the depression, is provided with a stud or projection *z*, in an angular position, usually at the right, with reference to the key hole, and hidden by the lock case. The plate *k*, is designed to be normally lifted by its spring out of engagement with the end shoulder *n*, of the slide way, so that when the shackle *g*, is moved across the notch *e*, of the padlock, this plate will rise or interpose in rear of the end of the bolt, thereby holding it in locked position. The shackle cannot then be moved back or to unlocked position until this plate *k*, is depressed to the level of the bottom of the slide way, when it can be moved back by means of a proper key.

The operating plate *h*, is provided with an aperture 3, which has fulcrum engagement with the key post. It is also provided with a catch hole 4, which conforms to the shape of the stud *z*, of the plate *k*, which it is designed to engage. The normal position of this catch hole is angular in its relation to the vertical line of the key hole 5, so that it is hidden by the padlock case. The height of the stud 2 is equal to the thickness of the operating plate at the catch hole 4, so that when the parts are in normal locked position, the stud *z*, being in engagement with this hole, a smooth surface is presented over the face of the operating plate at the point of engagement for the key. The operating plate is provided with a lug *r*, which engages a notch *w*, in the shackle. A key, suitable for a lock of this character, is indicated at 6, such key having an operative projection or toe 7. This toe or projection is designed to be of proper size and form to enter the catch hole 4, of the operating plate, and serves not only to press the stop plate back, but also to turn the operating plate, when the key is operated. The key hole, except for the post which presents at its upper part, is blind, being obstructed by the face of the operating plate. This plate cannot therefore be turned by means of any ordinary key having no operative projection. Nor can it be turned by turning the proper key to the left even after the catch device has been depressed. In order to unlock, a properly formed key being introduced is first turned to the right to the proper point to engage the catch hole of the crank plate. It is then pressed sufficiently to cause the stop plate to yield and become disengaged from the heel of the shackle, when, on turning the key to the left, the shackle will be drawn back.

Offset from the key hole in the front portion of the lock case is a recess 8, which is of sufficient depth to allow the key to be drawn back toward the face of the case so that it can be turned to alinement with the key hole for withdrawal. The lateral walls 9, of this recess, serve to prevent the key from being turned beyond a short distance, unless proper pressure is made at the

proper time. If the key is forcibly turned without such pressure and proper manipulation the key will be broken. When the curved shackle is shot, and the pressure relieved, the yielding stop plate will be moved
 5 by its spring to engage the heel of the shackle and hold it securely in locked position. At the same time the stud z, will engage the catch hole of the operating-plate and hold the latter in place while assisting by the position of its end, to guard the padlock against casual
 10 manipulation. In locked position the shackle cannot be withdrawn without either breaking such shackle or the padlock case.

Having described the invention, what I claim, and desire to secure by Letters Patent is:

15 1. A padlock having a notch, a slideway interrupted by said notch, a shackle fitting in said slideway and adapted to move across said notch, means for actuating said shackle, and depressible means for positively obstructing the retraction of the shackle normally lying in the path of
 20 the shackle, and adapted to be moved to release the shackle by direct inward key pressure.

2. A padlock having a notch, a central key post, an arcuate slideway concentric with said key post and interrupted by said notch, an arcuate shackle fitting in said slideway
 25 and adapted to move across said notch, an operating plate for said shackle, having fulcrum engagement with the key post, and means for positively obstructing the retraction of the shackle normally lying in the path of the shackle.

3. A padlock having a notch, a key post, a slideway interrupted by said notch, a shackle fitting in said slideway
 30 and adapted to move across said notch, an actuating lever device engaging said shackle and having its fulcrum upon said key post, and a depressible spring-pressed catch device for positively obstructing the retraction of the shackle
 35 normally lying in the path of the shackle and adapted to be moved to release the shackle by direct inward key pressure.

4. A padlock having a notch, a key post, a slideway interrupted by said notch, a shackle fitting in said slideway
 40 and adapted to move across said notch, a lever device for actuating the shackle having its fulcrum upon the key post

and having engagement with said shackle near the rear end thereof and means for positively obstructing the passage of the shackle, having normal engagement with the rear end thereof.

5. A padlock having a notch and a key post, an arcuate slideway interrupted by said notch, a shackle of arcuate character fitting in said slideway and adapted to move across said notch, an actuating lever device engaging said shackle and having fulcrum engagement with said key
 50 post, said lever device having a perforation therethrough, and a depressible catch device for normally preventing the retraction of the shackle having a projection engaging said perforation of the lever device.

6. A padlock having a notch and a key post, an arcuate slideway interrupted by said notch, a shackle of arcuate character fitting in said slideway and adapted to move across said notch, an actuating lever device engaging said shackle and having fulcrum engagement with the key post,
 55 said lever device having a perforation therethrough out of line with the key hole opening in the padlock case and hidden from view, and a depressible catch device for normally preventing retraction of the shackle having a projection engaging said perforation of the lever device.

7. A padlock having a key post and a shackle, an actuating lever device engaging said shackle and having fulcrum engagement with the key post, said lever device having a perforation therethrough out of line with the key hole opening of the lock case and hidden from view, and a depressible catch device for normally preventing retraction
 70 of the shackle having a projection engaging said perforation of the lever device.

8. A padlock having a notch and a key post, a slideway interrupted by said notch, a shackle fitting in said slideway and adapted to move across said notch, an actuating
 75 lever device engaging said shackle, and having fulcrum engagement with the key post, said lever device having a perforation therethrough, and a depressible catch device for normally preventing retraction of the shackle having a projection engaging said perforation of the lever device.

In testimony whereof I affix my signature, in presence of two witnesses.

MAURICE ACKERMAN.

Witnesses:

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 GEORGE M. ANDERSON.