

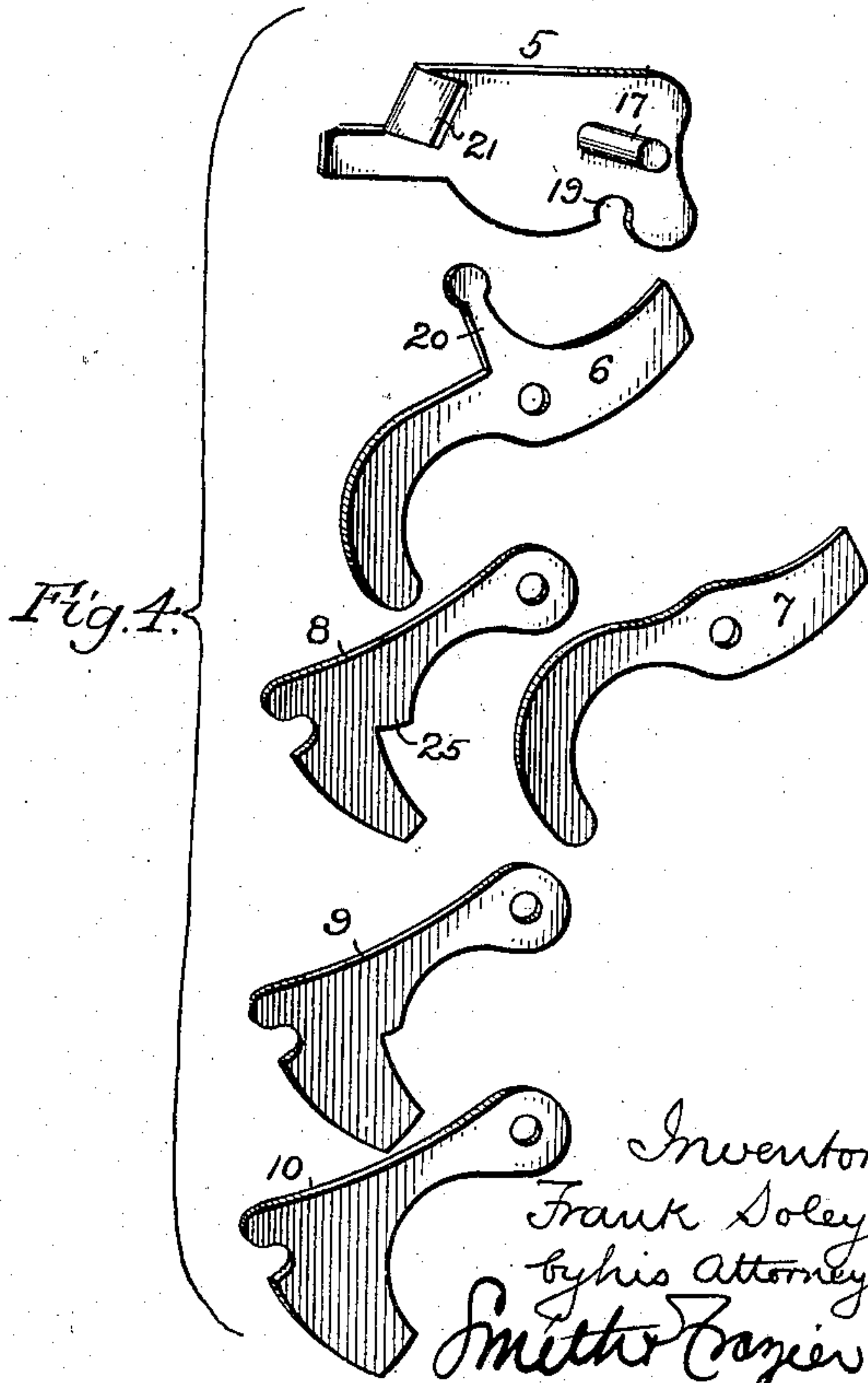
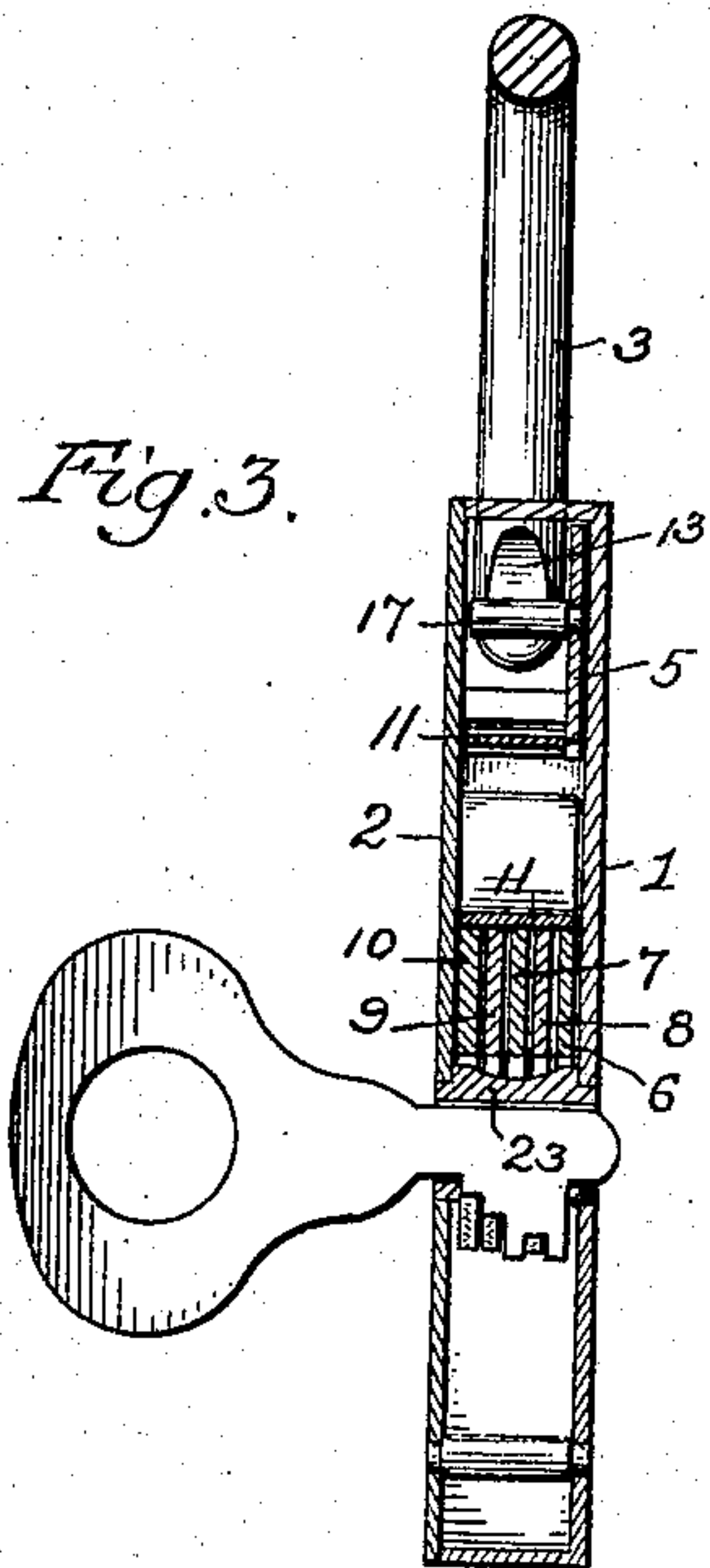
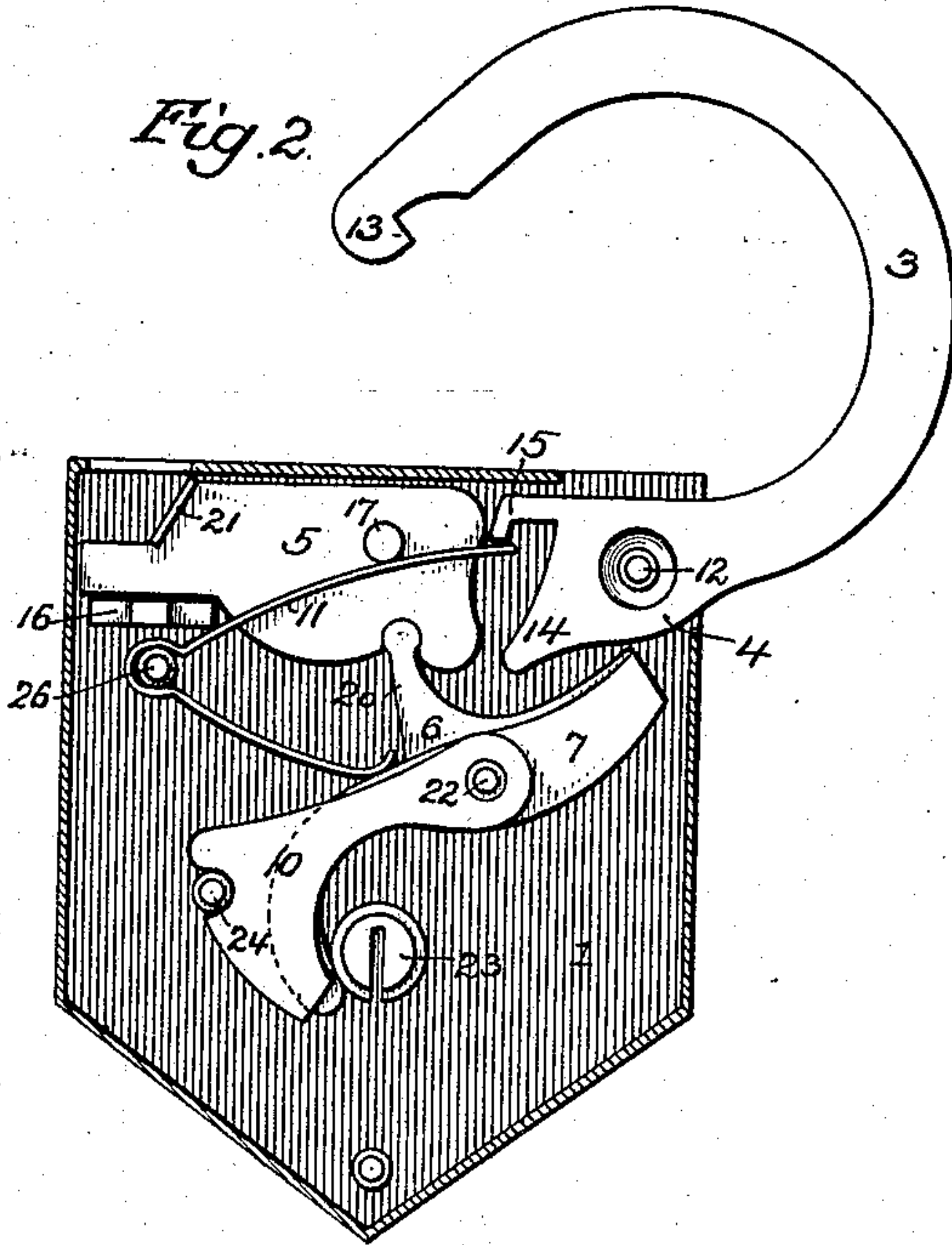
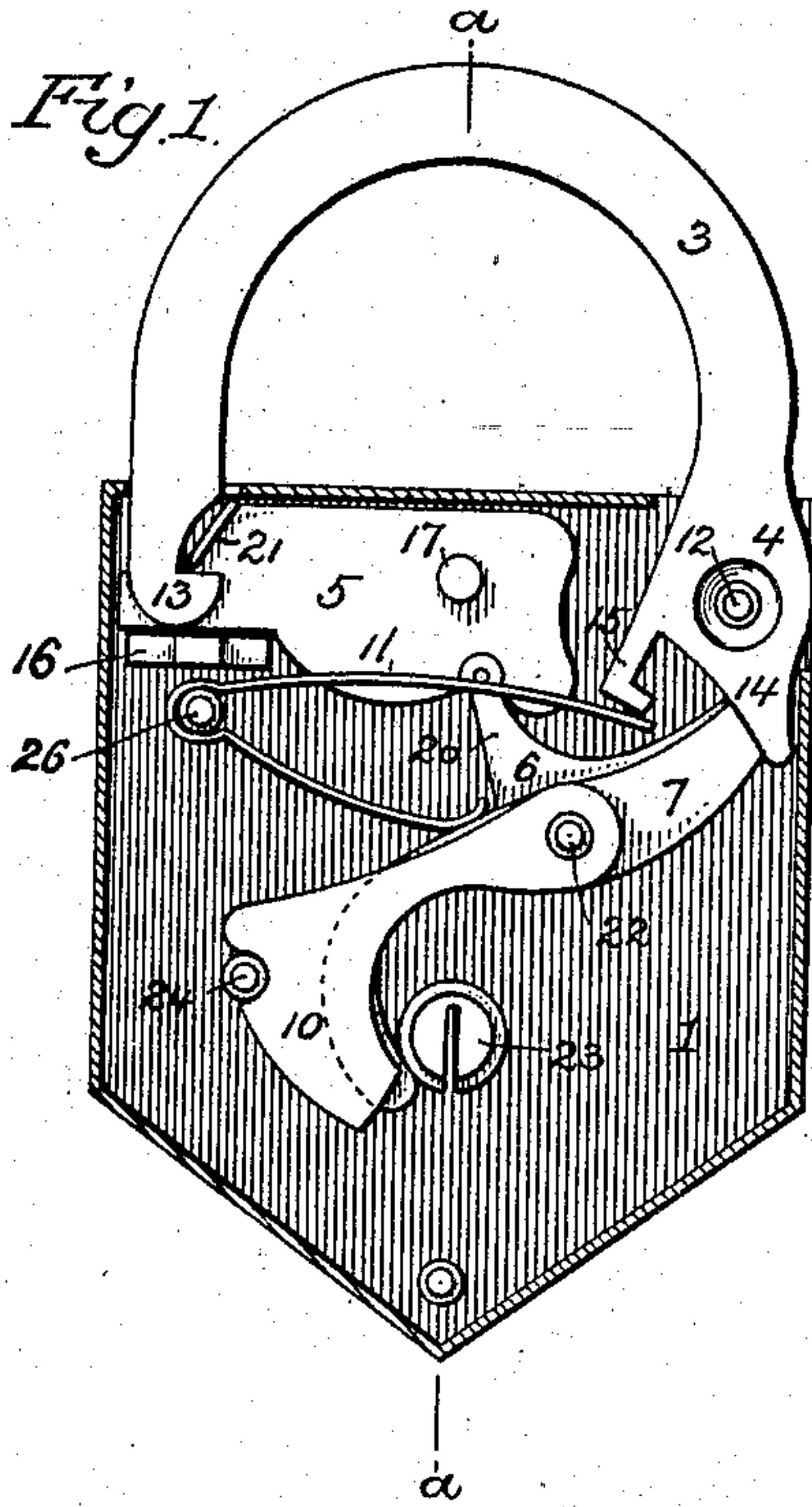
F. SOLEY.

PADLOCK.

APPLICATION FILED OCT. 11, 1906.

910,967.

Patented Jan. 26, 1909.



Witnesses
H. L. Smith.
Hamilton D. Turner

Inventor
Frank Soley
by his Attorneys
Smith & Turner

UNITED STATES PATENT OFFICE.

FRANK SOLEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO MILLER LOCK COMPANY,
OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

PADLOCK.

No. 910,967.

Specification of Letters Patent.

Patented Jan. 26, 1909.

Application filed October 11, 1906. Serial No. 338,456.

To all whom it may concern:

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

My invention relates to that class of padlocks in which the pivoted shackle has both a notched nose and a projecting heel, the locking
10 devices engaging with each of said parts in order to provide for a double locking of the shackle.

The object of my invention is to so construct a lock of this type that, while the
15 member which effects the locking of the notched nose of the shackle is operated by a tumbler of the lock, it will oppose a rigid resistance to outward pull upon the notched nose of the shackle.

20 In the accompanying drawing;—Figure 1 represents a front view of the lock with the cover-plate or front half of the casing removed, the lock being shown in a closed position. Fig. 2 is a similar view showing the
25 lock in the open position; Fig. 3 is a transverse section of the lock on the line *a—a*, Fig. 1, and Fig. 4 is a perspective view of the working parts of the lock detached from the casing and separated one from another.

30 The lock has a two-part casing 1 and 2, the back shell having a flanged edge which meets the front shell when said shells are secured together by riveting the opposite ends of the various transverse pivot pins or studs with
35 which the lock is provided, and which project through appropriate openings formed in the two shells, the flange being cut away for the entrance of the nose portion of the shackle 3 and also for the reception of the en-
40 larged butt or hub portion 4 of the same.

The working parts of the lock comprise a locking-plate 5, two tumblers 6 and 7, a series of wards or stationary washers 8, 9 and 10, and a spring 11.

45 The shackle is hung to a pivot pin 12 and has a notched nose 13, a projecting heel 14 and a toe 15 adjacent thereto. The locking-plate 5 is guided by the shackle stop plate 16 so as to be free to slide transversely across
50 the upper portion of the chamber within the lock casing, and it is held in its proper position against the back-plate 1 of the lock casing by means of a stud or lug 17 projecting from the front face of the locking-plate and

bearing against the inner face of the front
plate 2 of the lock casing, as shown in Fig. 3.

The locking-plate 5 has in its lower edge a notch 19 for the reception of the upper end of a projecting arm 20 on the rear tumbler 6, and both said rear tumbler and the tumbler
60 7 engage with the heel 14 of the shackle when the lock is closed, as shown in Fig. 1, a lug 21 on the locking-plate 5 at the same time engaging with the notched nose of the shackle.

The tumblers 6 and 7 are pivoted upon a
65 pin 22 and are acted upon by the bits of the key which is inserted in a slotted and rotatable key hub 23 journaled in the opposite shells of the casing.

The wards or fixed washers 8, 9 and 10 en-
70 gage the pin 22 and also engage another pin 24 in the casing, so as to be held against movement therein, these wards or fixed washers requiring that the key shall be
75 notched in a certain way for their reception, and the rearmost ward 8 also having a shoulder 25 for engagement with the bit of the key, in order to limit the turning movement of the same.

The spring 11 engages a transverse pin 26
80 in the casing, and has two arms, the lower bearing upon the backs of the tumblers 6 and 7 and serving to retain them in the normal position shown in Fig. 1, while the upper arm
85 bears upon the toe 15 of the shackle, and serves to swing the latter into the open position where it is free from the influence of the locking devices.

When the lock is closed, the parts are as shown in Fig. 1, but the action of the key
90 upon the tumblers 6 and 7 serves to retract the same until they are withdrawn from engagement with the heel of the shackle and at the same time causes an inward sliding movement of the locking-plate 5, so as to
95 withdraw its lug 21 from engagement with the notched nose 13 of the shackle, whereupon the latter is swung open by the action of the spring 11 upon the toe 15, as shown in
100 Fig. 2.

When the key is turned backward, or removed, the locking-plate and tumblers resume their normal positions. When the shackle is being closed the heel 14 of the same acts upon the tumblers to first retract
105 the same and the locking plate until the notched nose of the shackle has entered the case, whereupon the heel 14 clears the tum-

blers and the parts assume their normal or locking position.

By the employment, in connection with the notched nose of the shackle, of a sliding locking-plate engaging its operating tumbler in the manner described, a rigid resistance is opposed to outward pull upon the shackle, the plate 5 being incapable of yielding in that direction.

If desired, the tumbler 6 only may be used, or, if both tumblers 6 and 7 are employed, the tumbler 6 may engage only with the locking-plate 5, the tumbler 7 engaging the heel of the shackle.

I claim:—

1. The combination, in a padlock, of a casing, a pivoted shackle having a notched nose and a projecting heel, a transversely sliding locking-plate having a portion engaging said notched nose, and pivoted tumbler mechanism having engagement with the projecting heel of the shackle and also having an arm which engages and imparts sliding movement to the locking-plate.

2. The combination, in a padlock, of a casing, a pivoted shackle having a notched nose and a projecting heel, a transversely sliding

locking-plate having a portion for engaging the notched nose of the shackle and a projecting member bearing against the front of the casing and serving to maintain the locking-plate in its proper position at the rear of the same, and pivoted tumbler mechanism in engagement with the heel of the shackle and having an arm for engaging and imparting sliding movement to the locking-plate.

3. The combination, in a padlock, of a casing, a pivoted shackle having a notched nose and a projecting heel, a transversely sliding locking-plate having a portion engaging said notched nose of the shackle, and a pivoted tumbler having one arm for engaging a projecting heel of the shackle and another arm for engaging the transversely sliding locking-plate and imparting sliding movement thereto.

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

FRANK SOLEY

Witnesses:

HOWARD C. SMITH,
WILLIAM P. CAMERON.