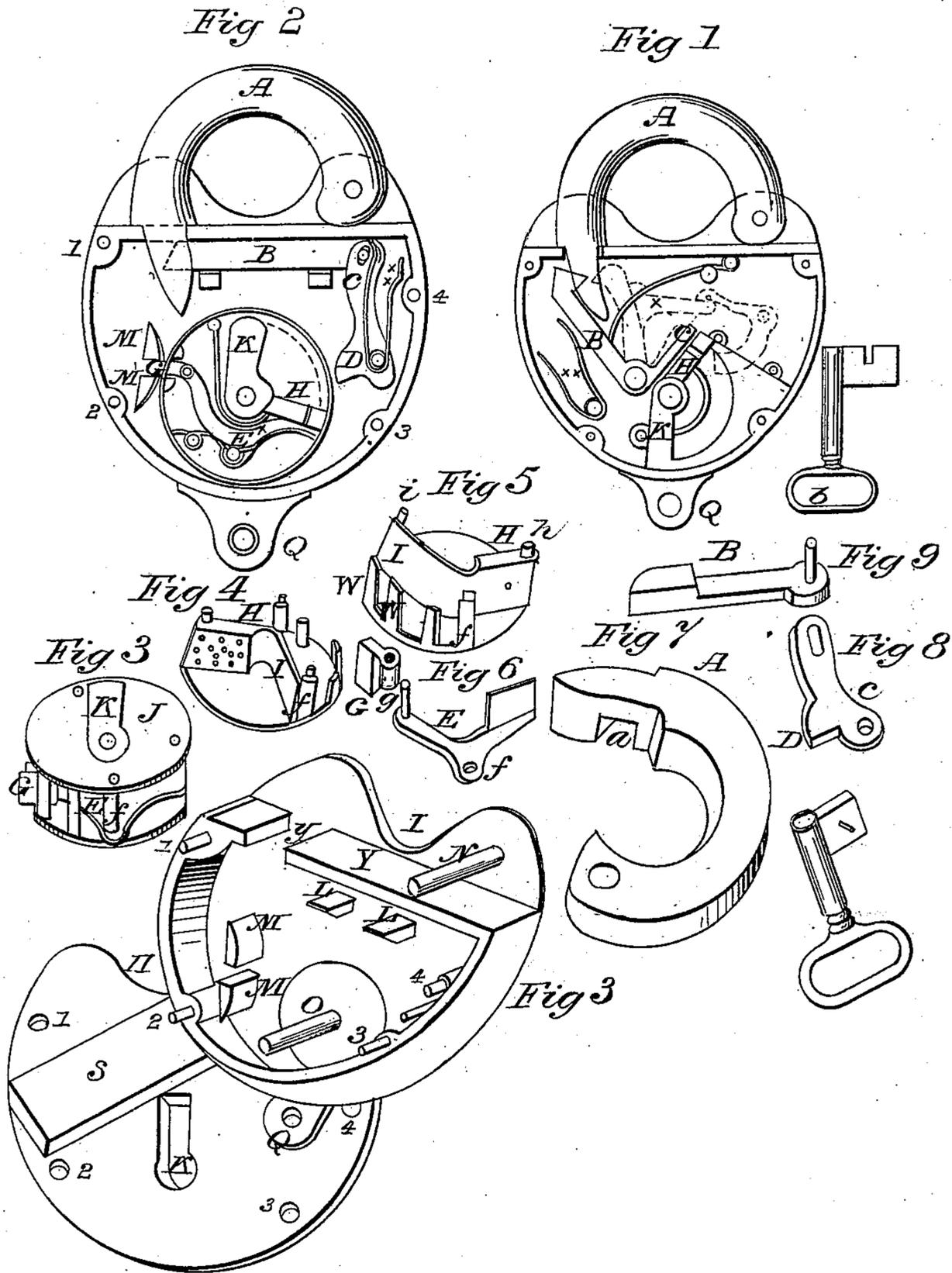


*F. F. Landis,*

*Padlock.*

*N<sup>o</sup> 77,740.*

*Patented May 12, 1868.*



*Witnesses:*

*Chas. S. Bailey*  
*Jacob Stauffer*

*Inventor:*

*Frank F. Landis*

# United States Patent Office.

FRANK F. LANDIS, OF LANCASTER, PENNSYLVANIA.

Letters Patent No. 77,740, dated May 12, 1868; antedated May 7, 1868.

## IMPROVEMENT IN PADLOCKS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, FRANK F. LANDIS, of Lancaster, in the county of Lancaster, and State of Pennsylvania, have invented a new and useful Improvement on Locks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a plan view of a modification of my lock, patented March 5, 1867, No. 62,545, adapted to a padlock, the pin or pins on the key (in this case a socket-key) employing the twin bolts B, one on top of the other, with the feet C resting against the perforated guard-chamber H, all of which I consider substantially met in my patent aforesaid.

Figure 2 is an improvement on the former and the subject of this application.

Figures 3, I, II, III, IV, &c., portions of my lock shown separately.

The nature of my invention consists in providing a padlock, that, while it shuts with a spring, and can be opened in an instant by any one acquainted with the "*modus operandi*," it is yet so contrived that a person with the key may work an hour in turning to the right and left, and fail to open it, without complying with the simple conditions required. At the same time, the lock is strong, and no amount of pounding will spring the bolt, nor can it be picked, nor an impression taken for making a key, and is found in every respect satisfactory to secure doors, &c.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Fig. 2 presents the plan of the interior.

Fig. 3. I shows a perspective view of the box or case, with its lugs L M, pivots O N, and connecting-pins 1, 2, 3, and 4, for the top or cover II, with the key-hole K, and spring-cover S, and holes for the pins, numbered in like manner, both being separately cast, in the ordinary manner, of brass or other metal.

The link-bolt A, with its notch, *a*, (VII,) sets on its pivot N, and, with its rounded, conic, notched end, enters the opening *y* of the top frame Y, and presses the bolt B back on its spring-tumbler C D, which springs forward, and locks into the notch *a* of the link A, and secures it in that position.

The parts introduced for unlocking consist in setting the cylinder J, III, over the fixed pin O, to which pin the socket in the key is adapted, which enters through the outer cover, II, into the cylinder, revolving freely with the key around the pin as an axis, through K, in J, the top of the cylinder or barrel, III. The bottom of this cylinder, with its perforated guard-chamber H I, and pillars and guide-posts, is cast as shown in Figs. IV and V.

Fig. IV shows false holes, of any number, partly drilled in, to prevent taking a cast, so as to know to which perforation the pin on the key is adapted, since each key can be varied in the position of the pin.

Fig. V shows the side of the vertical guard-chamber, with a single perforation through the thick wall H. Against this side the winged tumbler E rests, with its wing or raised flat side F covering the wall H, and held up by a spring against it. This tumbler has a rounded perforated angle, *f*, with a hole for slipping over the pivot *f* in the cylinder, the other arm extending inwards nearly at a right angle, where it has a vertical pin, *e*, to which a bolt, G, is hinged by its socket *g*, Fig. VI. This hinged piece G is held between the two guide-lugs W W of the cylinder, and, when in position, held by the spring. The point G projects beyond the cylinder, and enters between the lugs M M in the casing. These lugs are rounded on their inner face, from the centre outwards, forming inclined planes, against which the jointed piece G is pressed back, but spring forward into the open space between said lugs as the cylinder is turned, by the aid of the key, in either direction. This hinged piece G is in like manner pressed back when the cylinder is revolved, so as to bring it in contact with the upper or rounded nose or projection D on the dog or tumbler C, (VIII.) In moving from left to right, having slipped over the same, it again springs out, and will allow the cylinder to revolve round again to catch between the lugs M M, and thus it may be turned again and again.

The operation of the cylinder is so, that when the key is inserted, and turned to the right, (or in the only direction it can be turned,) quarter round, it comes in contact with the thickened wall H of the chamber. The pin on the key now strikes a headed pin loosely in the perforation made through the wall, (or two such pins, if desirable.) The flattened head of the loose pin being against the wing F on the tumbler E, (VI,) it is forced outwards, drawing the other hinged piece G in, and disengaging it from between the lugs M, said tumbler acting on its pivot *f*. The key, in this position, revolves the cylinder round, past the hook D on the lever C, (VIII.) When relaxed, the jointed piece G springs out, and on reversing the motion from right to left, it catches against the flat side of the lever D on tumbler C, moving on its pivot P, and pushes the lower end upwards, causing the upper end, which is connected with the spring-bolt B (IX) by an oblong slot, over a pin, *b*, so as to push it backwards, thereby drawing the bolt B back on its guide-lugs L, and disengaging it from the notch *a* in the link-bolt A, requiring at the same instant a pull upon the lock, so as to draw the link out, otherwise, the action of the lever having allowed the catch to pass, the bolt springs into its place, and locks again. It therefore demands a half turn to the right, then quickly to the left; and a pull upon the lock or link, to draw it out, on the instant the bolt is withdrawn, otherwise persons may fruitlessly turn round and round, unlock and as quickly lock the same, for a length of time, and fail to open it; but when understood, it is readily unlocked, and locked again by simply forcing the link down, without the aid of the key, making it altogether a strong, cheap, and reliable lock for doors of any kind, where padlocks are used, and found to render satisfaction in every particular.

I am aware that revolving cylinders are not new; that various devices are employed and patented, embracing a diversity of arrangements claimed by other inventors, when the link-bolt is locked by interior tumblers, levers, and springs. But I am not aware that any revolving cylinder has a chamber or wall, H I, perforated, and partially perforated, with a winged tumbler, E F, operated in the manner specified and shown.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The rounded right-angled chamber or partition I, with its wall, H, thickened and perforated, in combination with the hinged and winged tumbler G E F, on its pivot *f*, within a cylinder; J, revolving freely on the pin O, for the socket in the key, arranged and operated in the manner specified.

2. In combination with said chamber or partition I H, and tumbler G E F, I also claim the arrangement of the lever C, with its hook D, in connection with the spring-bolt B, by the pin *b*, when actuated in the manner and for the purpose set forth.

FRANK F. LANDIS.

Witnesses:

CHAS. R. FRAILEY,  
JACOB STAUFFER.