P. LESIUK.

LOCK.

APPLICATION FILED OCT. 31, 1919.

1,330,378. Patented Feb. 10, 1920.

Fig. 1

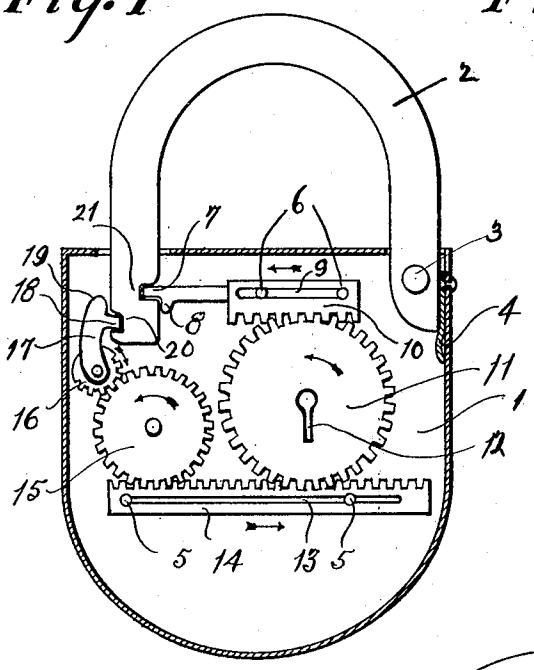


Fig. 3

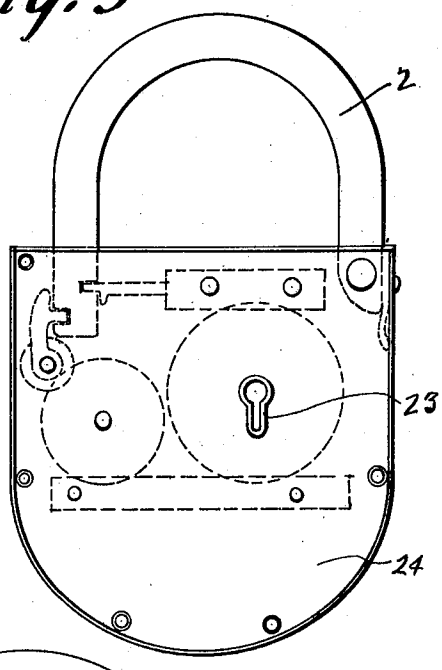
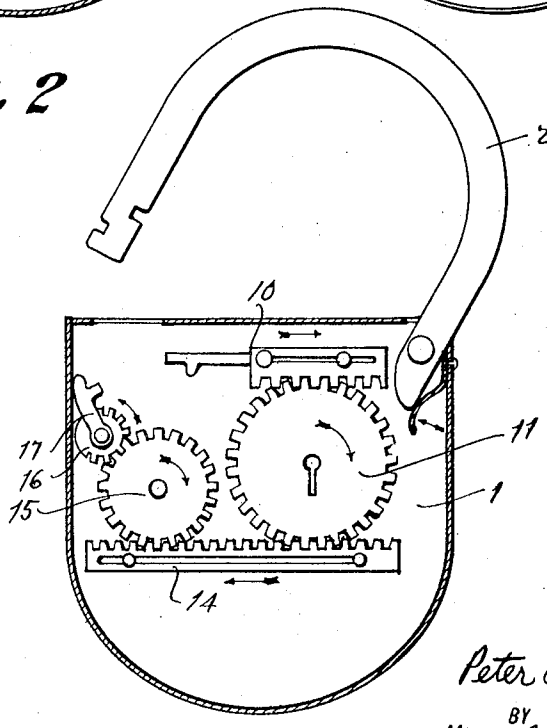


Fig. 2



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UNITED STATES PATENT OFFICE.

PETER LESIUK, OF KOHLER, WISCONSIN.

LOCK.

1,330,378. Specification of Letters Patent. Patented Feb. 10, 1920.

Application filed October 31, 1919. Serial No. 334,816.

To all whom it may concern:

Be it known that I, PETER LESIUK, citizen of Ukrania, residing at Kohler, in the county of Sheboygan and State of Wisconsin, have invented certain new and useful Improvements in Locks, of which the following is a specification.

This invention relates to locks, and has for its main object the provision of a novel operating mechanism by means of which the lock may be securely locked against unauthorized opening.

Another object of the invention is to provide such a lock of durable and practical construction, and inexpensive in cost of manufacture.

The above and other objects will become apparent in the description below, in which characters of reference refer to like-named parts in the drawings.

Referring briefly to the drawings, Figure 1 is a plan view of my lock with the cover removed to expose the mechanism thereof.

Fig. 2 is a similar view with the cover in place.

Fig. 3 is a view with the cover removed and the lock in open position.

Referring now in detail to the drawings, the numeral 1 represents the casing of my lock, and 2 the staple hook or shackle hinged or pivoted to said casing by means of a pin 3. A spring 4 presses against the end of said hasp so as to force the same upward on opening the lock. Pins 5 and 6 are rigid to the rear of the casing 1. The latter pins engage a slot 9 in a horizontal rack 10 which is provided with a bolt extension 7 and a depending lug 8, a shoulder being formed by the latter two portions.

The rack 10 engages a toothed wheel 11 having a key recess 12 therein. A second horizontal rack 14 is engaged by the gear 11, and slides upon pins 5 in the slot 13. A second toothed wheel, smaller than the first, is engaged by the other end of the rack 14, and is indicated by 15. The latter gear engages a toothed sector 16 attached to a curved arm 17 which is provided with a pair of lugs or projections 18 and 19 displaced at mutually right angles, in similar fashion to the humps 7 and 8. The shackle 2 is provided with recesses 21 and 20 which are adapted to engage the projections 7 and 18, respectively.

The operation of the lock is as follows: Assuming the lock to be closed, as in Fig. 1, a suitable key is inserted in the keyhole 23 in the cover 24, the key engaging the hole 12. The key is then turned to the right, causing the gear 11 to turn clockwise, the rack 14 to move toward the left, the gear 15 to turn clockwise, the sector 16 to turn counter-clockwise, and thus the arm 17 disengages the hooked projection 18 from the recess 19. At the same time the rack 10 has been moved toward the right, causing the projection 7 to be disengaged from the recess 21. Thus the spring 4 then forces the shackle 2 upward, and the lock is open.

To close the lock, the shackle is brought back to its closed position against the pressure of the spring 4, and the key is turned counterclockwise. It is apparent that by means of my double engagement of the shackle 2 and the security of my gear and rack mechanism, that I have provided a lock which is certain to hold against tampering.

Having thus described my invention, what I claim and desire to secure by Letters Patent is as follows:

1. In a device of the class described, a casing, a pair of spaced apart pins rigid thereto, a toothed rack having a slot in engagement with said pins, a gear engaging said rack, a second toothed rack, having a slot therein, a second pair of pins rigid to said casing, and engaging the latter slot, a second gear engaging said second rack, a toothed sector engaging said second gear, an arm on said sector, projections on said arm and said first-named rack, and a shackle having pivotal engagement with said casing and recesses therein adapted to be engaged by said projections.

2. In a device of the class described, a casing, a shackle pivoted to said casing, spring means between said shackle and said casing, recesses in said shackle, racks slidable in said casing, an extension on one of said racks adapted to engage one of said recesses, a toothed sector, an arm on said sector having a lug adapted to engage the

other of said recesses, a main gear for operating said racks, and means operable by the other of said racks to swing said lug on said arm into engagement with the said last-named recess.

3. In a device of the class described, a casing, a hasp pivoted to said casing, recesses in said hasp, means slidable and rotatable respectively in said casing to engage said recesses, and gears and racks operable to move said means.

In testimony whereof I affix my signature.

PETER LESIUK.