

(No Model.)

J. MLOTKOWSKI.
LOCK.

No. 542,001.

Patented July 2, 1895.

Fig. 1

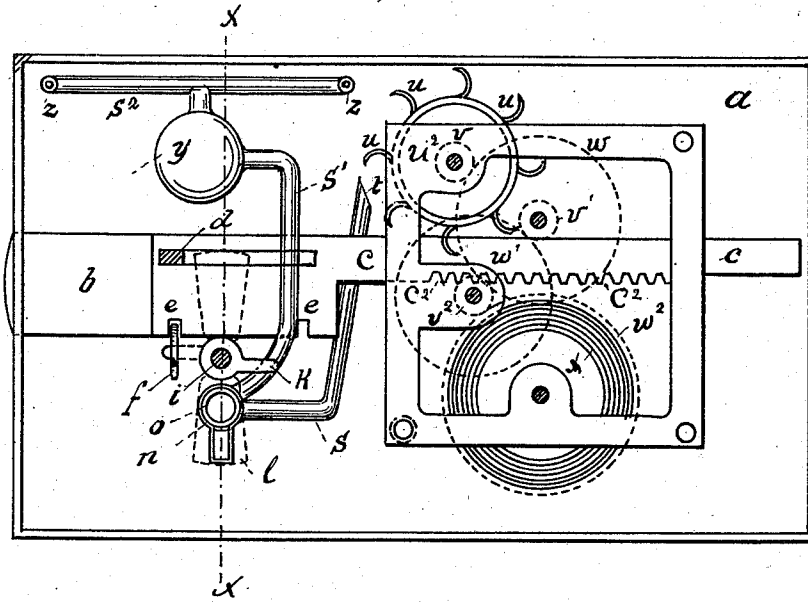


Fig. 2

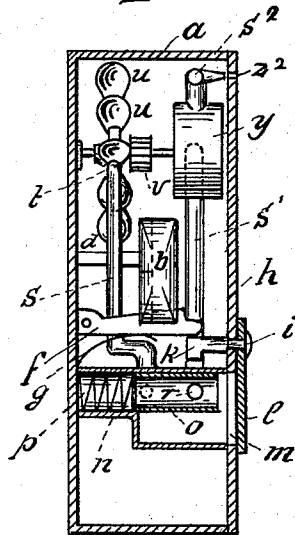
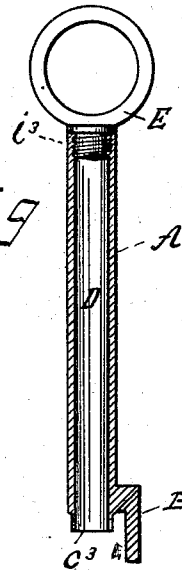


Fig. 3



Witnesses:
W. Goudy.
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LOCK.

SPECIFICATION forming part of Letters Patent No. 542,001, dated July 2, 1895.

Application filed November 24, 1894. Serial No. 529,861. (No model.)

To all whom it may concern:

Be it known that I, JOZEF MLOTKOWSKI, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny, State of Pennsylvania, have invented a new and useful Improvement in Locks, of which the following is a specification.

My invention relates to improvements in locks in which air-pressure is used in conjunction with a key to move the bolt back to unlock it, and depending on a clockwork attachment to lock the door, when released by mechanism hereinafter described; and the object of my invention is to provide a lock that cannot be picked open by nippers or false keys. I attain this object by a mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view showing all of the parts of the lock except the outer cover. Fig. 2 is a cross-section on line $x x$, Fig. 1, showing the relative positions of each part, excepting a portion of the clockwork. Fig. 3 is a vertical section of key, showing all parts.

Similar letters refer to similar parts throughout the several views.

The base-plate a is made of metal having sides turned up to a sufficient depth to hold the mechanism. A clockwork is secured to the base-plate, provided with a common driving-spring x , Fig. 1, connected with a master-wheel w^2 , having cogs on its periphery that mesh into a pinion v^3 , which is connected with another larger wheel w' , which meshes into a pinion v' , fixed to another large wheel w , and drives the pinion v , which is fixed to the fan-wheel u^2 . The fan-wheel is provided with vanes $u u u$, placed at intervals on its periphery. A bolt b , having a tail $c c$, is placed longitudinally in the frame, held in place partly by the stud d in an oblong slot. The under side of the tail is provided with a rack $c^2 c^2$, in which the pinion v^3 meshes. A circular chamber is fixed to the base-plate. (See n , Fig. 2.) Two air tubes $s' s$ are connected with the chamber, one, s' , passing above the bolt b and leading to a reservoir y ; the other, s , leading under the bolt to the vanes $u u u$. Both have openings into the chamber n . Within the chamber a tubular valve o is placed, provided with a port-hole r , (see Fig. 2,) and it rests on a spiral spring p , with the port r opposite to

the opening in the air-tube s' , which leads to the reservoir y , a branch tube s^3 , taken from the reservoir. Both ends are turned up at right angles and reduced to a small opening. (See $z z$, Fig. 1, object explained below.)

f is a latch pivoted to the base-plate, held against the side of the bolt by a spring g . When the bolt is drawn back it falls into the forward notch e and holds it back.

k is a lever fixed to a keyhole-cover l on the outside of the lock by a screw i , and when the cover is half-way around (shown by dotted lines, Fig. 1) the lever trips the latch out of the notch and releases the bolt, which is then moved forward by the clockwork until the latch falls into the rear notch e .

The key shown at Fig. 3 is constructed of tube A , provided with a bow E and a nipple z^2 . At the lower end a tongue B is fixed to one side, extending a little below the end of the tube. The lower end of the tube is reduced somewhat in size at c^3 to fit into the tubular valve o .

D is the air-passage in the key.

To operate this lock, the outer cover h having been fitted on, supposing it to be in the situation shown in Fig. 1, unlocked and at rest, first turn the keyhole-cover half-way around to the right, when the lever k will force the latch out of the notch e . The spring in the clockwork having been previously wound up, will force the bolt out until the latch falls into the rear notch e , thus locking it without using the key. To unlock, the bow is unscrewed from the tube in the key and the key inserted in the opening or keyhole m and into the valve o . Then it is pressed down until the port r comes opposite to the opening in the tube s . Then apply the mouth to the end of the key-tube and blow strongly through it. The air will pass through the tube s and be discharged at t against the vanes $u u u$, causing it to revolve, thus winding up the clock-spring and at the same time drawing the bolt back; but if the operator has not been previously informed and only places the key in loosely and does not press it down the port remains opposite to the tube s' and the air will pass into the reservoir y and thence out at the two points $z z$, Fig. 1, and through two apertures in the outer plate h . (See $z z$, Fig. 2.) The reservoir having been pre-

viously filled with pepper or ginger, it will be discharged into the eyes of the operator and discourage him from his efforts to get the lock open.

5 Having thus described my invention and the method of operating it, what I claim, and wish to secure by Letters Patent, is—

1. The combination in a door lock having air tube S' connected with the reservoir, and
10 discharge tubes z, z , and tube S , operating in conjunction with the fan wheel and vanes, substantially as set forth.

2. In a door lock the combination of a bolt b , provided with a tail piece c, c , having a rack

on its under side, meshing into a pinion, connected by intermediate gearing with the fan wheel w^2 and master wheel w^2 , with a clock spring attached thereto, substantially as described.

3. The combination in a lock of the tubular key A , in combination with the air tubes leading to the fan wheel and reservoir y , substantially as set forth.

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Witnesses:

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