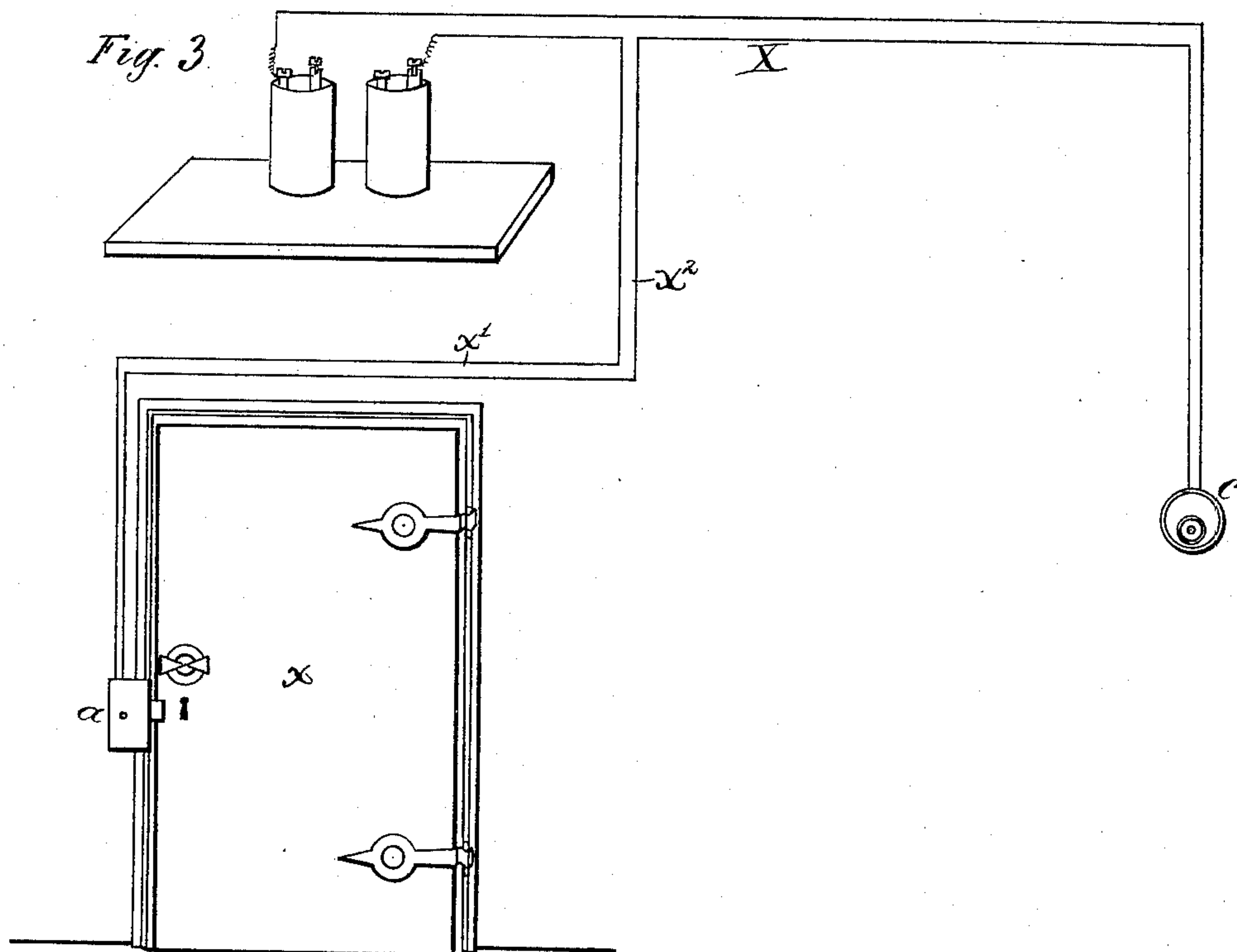
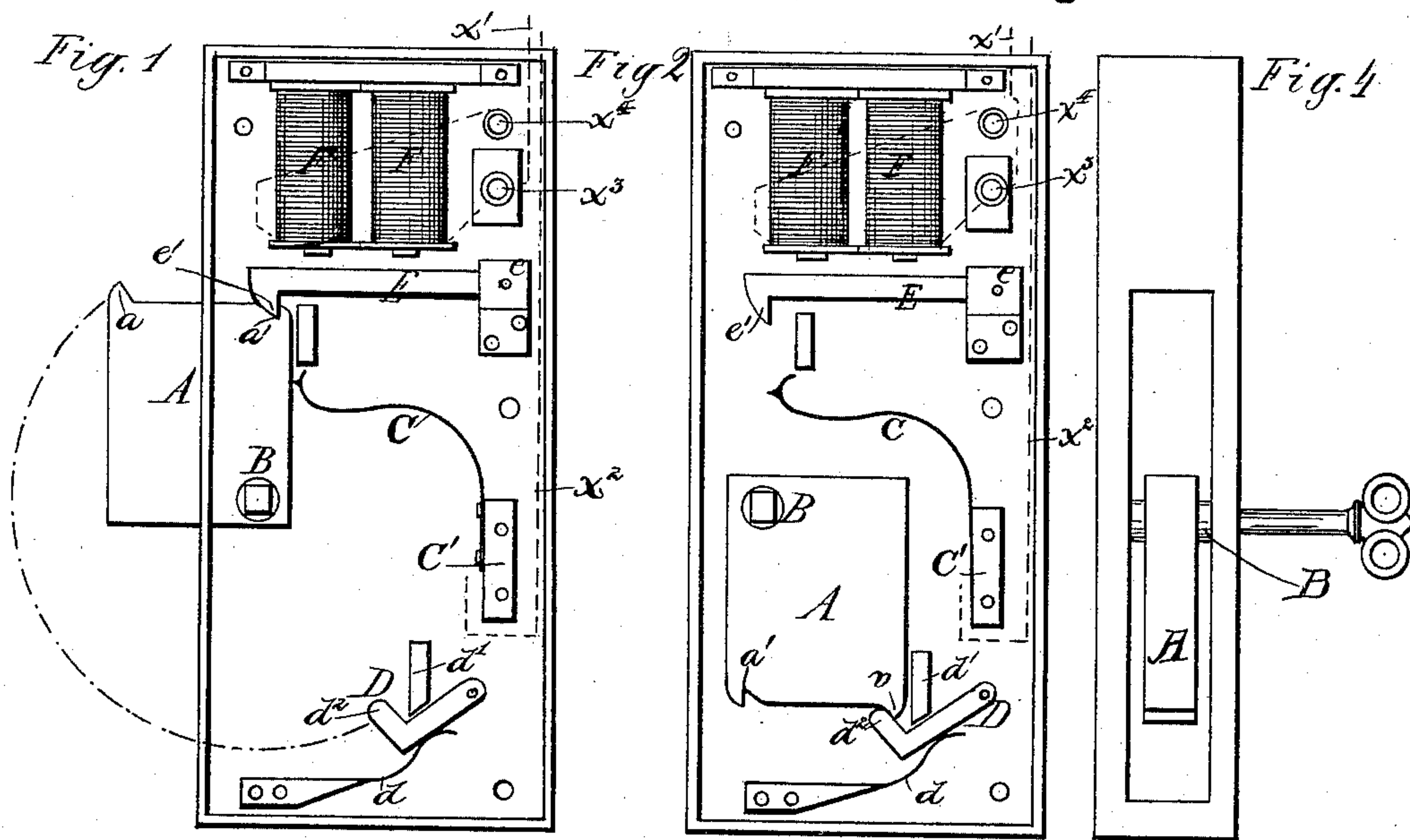


(No Model.)

P. SCHWENKE.
ELECTRICAL LOCK.

No. 409,508.

Patented Aug. 20, 1889.



Witnesses:-

Leverance
A. Reed

Inventor:-

Paul Schwenke
By *L. Deane*
his Attorney.

UNITED STATES PATENT OFFICE.

PAUL SCHWENKE, OF ZERBST, ANHALT, GERMANY.

ELECTRICAL LOCK.

SPECIFICATION forming part of Letters Patent No. 409,508, dated August 20, 1889.

Application filed November 16, 1888. Serial No. 291,072. (No model.) Patented in Germany August 18, 1887, No. 43,050; in France October 3, 1887, No. 186,184, and in Austria-Hungary February 26, 1888, No. 38,543.

To all whom it may concern:

Be it known that I, PAUL SCHWENKE, a subject of the Duke of Anhalt, residing at Zerbst, in the Dukedom of Anhalt, German Empire, have invented certain new and useful Improvements in Electrical Locks, (for which I have obtained Letters Patent in Germany on the 18th day of August, 1887, numbered 43,050; in Austria-Hungary on the 26th day of February, 1888, numbered 38,543, and in France on the 3d day of October, 1887, numbered 186,184,) of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to improvements in electrical locks; and it consists in the construction and novel combination of parts, hereinafter described, illustrated in the drawings, and pointed out in the claim.

The object of the invention is to produce a lock that may be operated from a distance by an electric circuit, the closure of which may be effected at any time by a circuit-closer of ordinary construction.

In the accompanying drawings, Figure 1 represents a front view of a lock embodying the invention, the front plate being removed and the bolt locked. Fig. 2 represents the lock, being a similar view with the bolt released. Fig. 3 represents the lock applied to a door and the circuit and battery attached thereto. Fig. 4 is an end elevation of the lock.

Referring to the drawings by letter, A designates a rectangular bolt mounted on the arbor or short shaft B, journaled at its ends in the front and back plates of the lock-casing, and provided with an angular bore, as shown, by means of which and a key fitting in said bore the bolt may be turned up to lock. The bolt has the triangular projection a on its upper outer corner, when turned up, and the triangular locking-notch a' similarly on its upper inner corner.

F F are electric magnets secured within the top of the back casing, and E is an armature below said magnets with its heel pivoted at e within the casing on the opposite side from the bolt. The said armature is a catch or detent, and has a hook-point e' , that enters the notch a' and holds the bolt up.

C is a spring secured to a block C', secured within the lock-casing, which spring bears against the adjacent free edge of the bolt and holds the shoulders of the notch a' and point e' closely together, so that the bolt cannot rattle.

D is a pivoted detent-hook pressed upward by the free end of the spring d , attached to a block secured within the casing at the lower part thereof, and d' is a stop-block to prevent said detent-hook from rising too far. The upwardly-standing point d^2 of said detent catches under the triangular projection a of the bolt, when the latter is down, and steadies it. The detent, however, on account of the incline of the projection d^2 , when turned up by a suitable key, releases the projection a and permits the bolt to rise.

In Fig. 3 a circuit X, inclosing a battery, is shown connected to a lock secured to a door x , the said circuit being normally open and provided with a circuit-closer c , of common construction, at a suitable point.

It is evident from the above that when the circuit X, which embraces the magnets F, is closed the magnets will attract and draw up the armature, releasing the bolt, which will fall by gravity, the point a engaging the detent D and steadying the bolt.

To lock the bolt, when the circuit is again open, the bolt is turned up till the point e' engages in the notch a' . The circuit X is composed of the wires x' x^2 , which extend between the circuit and the lock. The wire x' passes from the circuit-closer to the top of the lock, enters therein to a screw-block x^3 , which must be insulated, and thence to the nearest magnet F. The wire x^2 also passes in the top of the lock to a similar screw-block C', to which the spring C is secured, the current thence passing through the lock-plate to the screw-block x^4 , and thence to the opposite magnet F.

Having described my invention, I claim—

The combination, with the circuit X, composed of the wires x' x^2 , having a suitable circuit-closer at a proper point, and the electromagnets F in said circuit, the wires x' x^2 extending from the circuit-closer to the top of the lock, passing therein and connecting with

the opposite magnets F, in the manner substantially as described, of the lock, comprising the shaft B, journaled in the front and rear plates of the back casing and having an
5 angular bore for the purpose of being turned up by a key fitting in said bore, the rectangular gravity-bolt A, mounted on said shaft and provided with the projection *a* and notch *a'*, the armature E, pivoted within the casing at
10 *e*, below the magnets F, and provided with the

point *e'* to engage the notch *a'*, the springs C *d*, and the pivoted detent D, all constructed and arranged substantially as and for the purpose specified.

In testimony whereof I have hereunto set
my signature in presence of two witnesses.

PAUL SCHWENKE.

Witnesses:

B. ROI,

W. KEUFFEL.