No. 608,319. Patented Aug. 2, 1898.

HENRY GUY CARLETON.

ELECTROMECHANICAL LOCK.

(Application filed Sept. 9, 1897.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

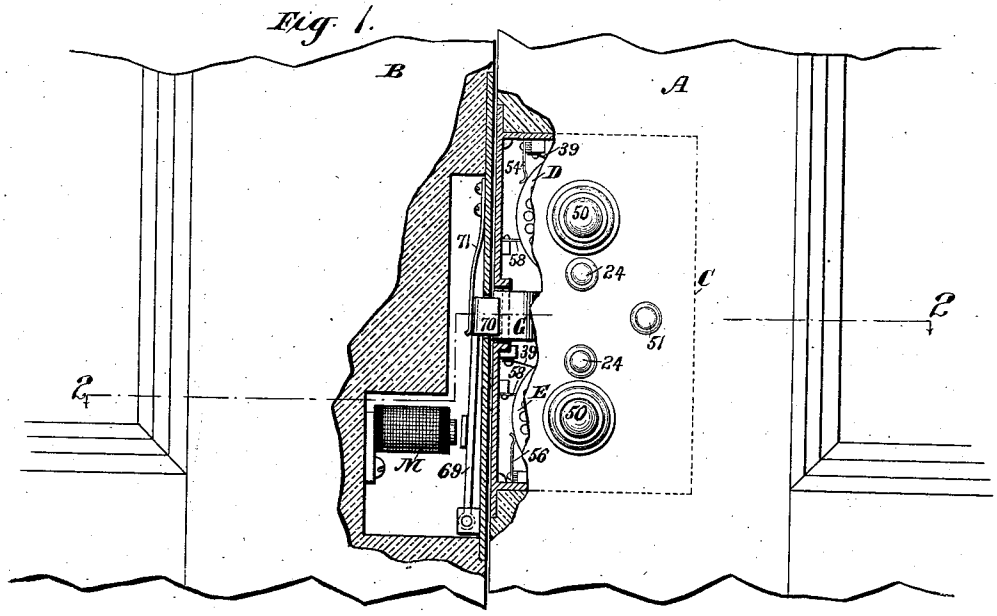


Fig. 2.

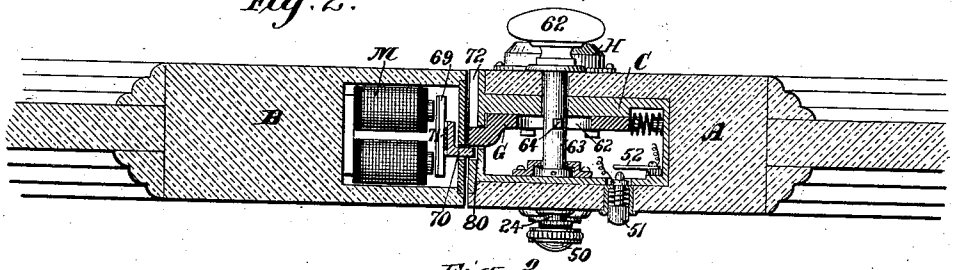
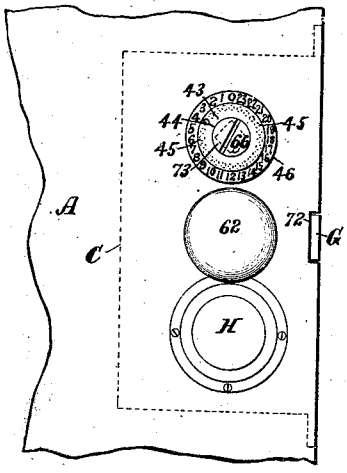


Fig. 3.



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(No Model.) 3 Sheets—Sheet 2.

Fig. 4.

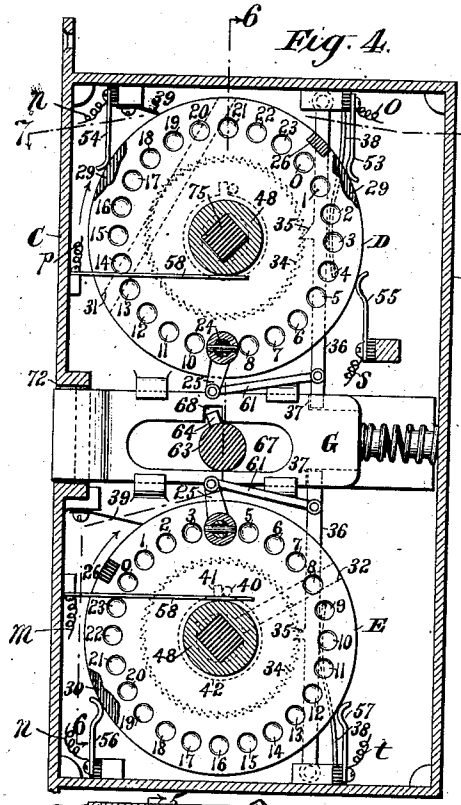


Fig. 5.

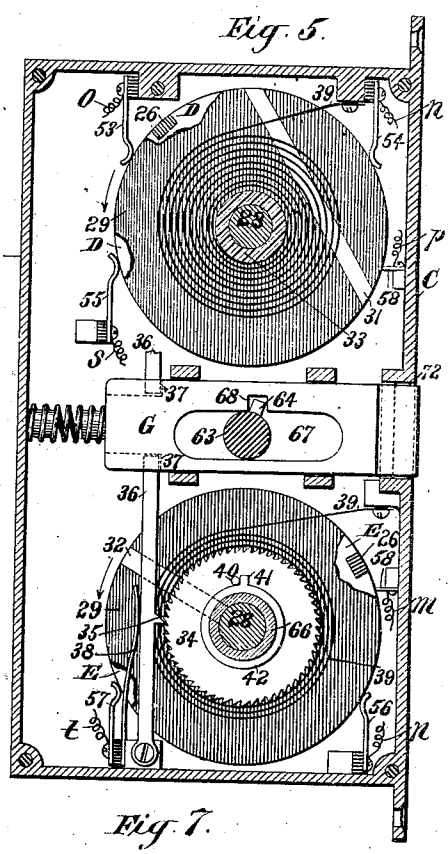


Fig. 6.

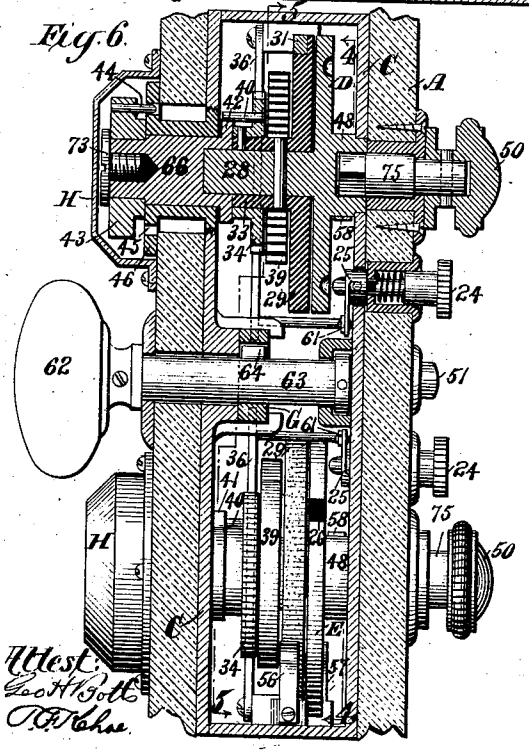


Fig. 7.

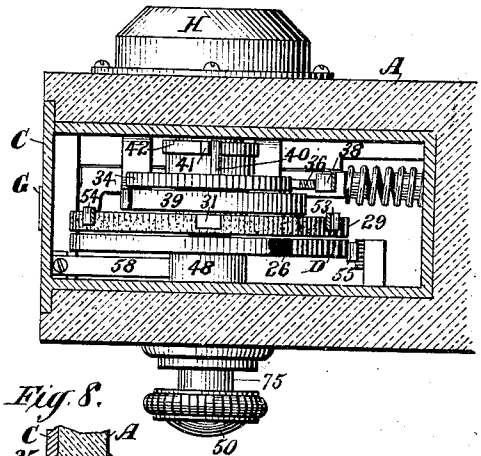
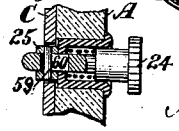


Fig. 8.



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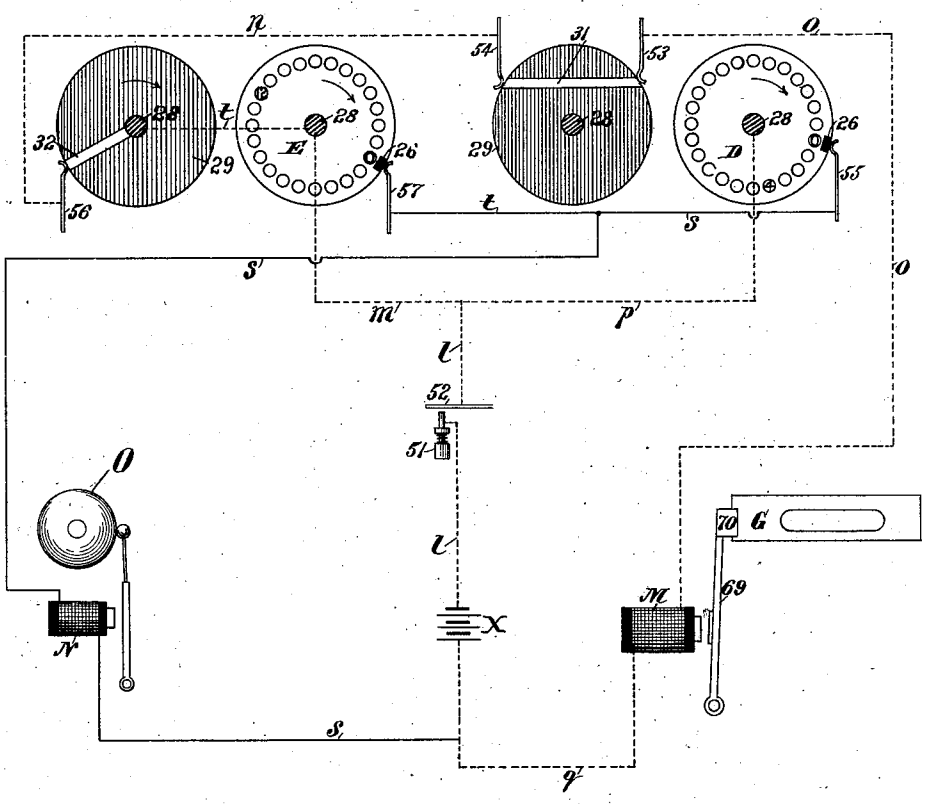
HENRY GUY CARLETON.

ELECTROMECHANICAL LOCK.

(Application filed Sept. 9, 1897.)

(No Model.) 3 Sheets—Sheet 3.

Fig. 9.



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UNITED STATES PATENT OFFICE.

HENRY GUY CARLETON, OF NEW YORK, N. Y.

ELECTROMECHANICAL LOCK.

SPECIFICATION forming part of Letters Patent No. 608,319, dated August 2, 1898.

Application filed September 9, 1897. Serial No. 651,016. (No model.)

To all whom it may concern:

Be it known that I, HENRY GUY CARLETON, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Electromechanical Locks, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to that class of locks which is provided with electrical means for unlocking the same; and the invention consists in an improved construction whereby a lock having no exterior means for moving its boltwork has its bolt secured by a keeper electrically withdrawn and which lock has within it a combination mechanism for making the circuit, exterior means for operating the combination and for completing the circuit, and in combination therewith an alarm device whereby tampering with the same will be exposed.

The invention also includes various improved constructions and combinations, which are hereinafter fully explained, and finally pointed out in the claims.

A practical embodiment of this invention is illustrated in the accompanying drawings, in which like characters of reference indicate corresponding parts, and arrow-heads connected with section-lines indicate the direction in which the picture is seen.

In said drawings, Figure 1 is an elevation of a portion of a door and its jamb, showing my improved lock attached thereto, some of the exterior parts being broken away to expose others. Fig. 2 is a horizontal sectional view of the same, taken on the line 2 2 of Fig. 1. Fig. 3 is an inside view of the door, illustrating the parts of the lock that show on that side. Fig. 4 is an enlarged sectional view of the lock, taken on line 4 4 of Fig. 6, looking to the left as the arrow-head points or in a direction toward the back of the lock. Fig. 5 is a similar view taken on line 5 5 of Fig. 6, looking to the right as the arrow points or in a direction toward the front of the lock. Fig. 6 is a vertical sectional elevation taken on the line 6 6 of Fig. 4, one of the disk-operating mechanisms being shown in section and the other in elevation. Fig. 7 is a horizontal sectional view taken on line 7 7 of Fig. 4. Fig. 8 is a sectional detail. Fig. 9 is a diagram illustrating various parts of the lock and the locking devices and the electrical connections necessary to the operation of the parts.

As the preferable form of my invention I have shown a lock comprising two like sets of electric-current-controlling disks and operating mechanisms, and in describing the same it will be understood that a description of corresponding parts of one set will apply to both.

To exemplify this invention, an ordinary mortise-lock C has been selected, said lock being secured to the door A in a common manner and so as to coöperate with parts secured to the jamb B. Within the casing of the lock an upper disk D and a lower disk E are mounted, so as to be rotated by exterior knobs 50, which disks are preferably made of brass because of its conductive capacity. The face of each of these disks is provided with a circularly-arranged series of countersunk recesses suitably designated, as by the numbers "0" to "23," each of which recesses is adapted to be engaged by an indicator-pin, as 24, which is preferably spring-retracted. Each disk is provided, say, at a point corresponding with its recess 0, with a non-conducting plug, as 26, of hard rubber or other suitable insulating material inserted in its periphery.

The conductive disks D E are each carried by metal spindles, as 28, upon each of which spindles is mounted a non-conducting disk, as 29, having an extended hub, as 33, through which the spindle passes. These disks 29 are made of suitable insulating material, preferably hard rubber, and are pinned to the spindles, so as to partake of all of the movements of the disks D E, respectively. The upper disk 29 is provided with a metal conducting-bar 31, so inserted in and fastened to it that it extends to and has both its ends exposed at the periphery of the disk, (see Figs. 5 and 9,) and the lower disk 29 is provided with a similar metal conducting-bar 32, which has one end extended to and exposed at the periphery of the disk and the other end arranged to contact with the spindle 28 of the disk E. The hub 33 of each disk 29 carries fast thereto a ratchet-wheel 34, that is en-

gaged by the fixed pawl 35, extending from a swinging ratchet-bar 36, each of which ratchet-bars is pivoted at its outer end to an ear projecting from the casing of the lock, has its inner end adapted to engage a shoulder 37, formed on the bolt G of the lock, and is held forward to duty by means of a spring 38, so that its pawl 35 will normally be held in engagement with the ratchet-wheel 34. Between each ratchet-wheel 34 and the disk 29, which carries it, there is a helical spring 39, the inner end of which is attached to the hub 33 of the disk, while its outer end is secured to an ear projecting within the lock-casing, as shown in Fig. 5. The spring 39 for each disk 29 retains said disk and the parts connected therewith in normal position and returns it to such position after each operation.

Each ratchet-wheel 34 is provided with a pin 40, that engages the single tooth 41, carried by a small disk 42. The disks 42 are at the inner ends of spindles 66, the outer ends of which are squared and support setting-wheels 43, each of which carries a pin 44, that is arranged to enter the circular series of holes 45, formed in dial-plates 46, each of which dial-plates is marked on its outer face with numbers corresponding to the position of its holes 45, as is shown in Fig. 3, and which holes 45 correspond in position with the countersunk recesses in the disks D E. These dial-plates 46 are held stationary, as by means of hollow shanks, which are screwed fast to the lock-casing, as shown in Fig. 6, and thus form a bearing for the spindles 66. The setting-wheels 43 are held in place on the spindles 66 by means of the flanged heads of holding-screws 73, which enter tapped holes in the spindles 66. Each wheel 43 is housed and protected by a cover H, screwed or otherwise fastened to the door, thereby keeping the different parts from view and also giving a finished appearance to the inner surface of the door. From the face of each disk D and E there centrally projects a sleeve 48, that is journaled in the casing of the lock and which is provided with a multifaced socket to receive the similarly-shaped inner end of an operating-spindle 75. These spindles 75 are provided with actuating-knobs 50, and their inner ends are engaged with the said sockets, so that the companion disks D and 29 and E and 29 may be rotated when desired and their appurtenances may be actuated as required.

The spring-seated indicator-pins 24 are mounted in such a manner as to be capable of a rotative as well as a longitudinal movement, and each has a milled head to enable it to be readily rotated by one's fingers.

Each pin 24 carries a rock-arm 25, that is connected with the ratchet-bar 36 by means of a connecting-rod 61 and pivots, by which means a rotative movement of a pin 24 will operate to throw the ratchet-bar 36 out of engagement with its ratchet-wheel 34, and in order that these pins 24 may be moved longitudinally without affecting the rock-arms 25 they are slotted, as at 60, to embrace the pin 59, by which the hub of the rock-arm 25 is connected to them, as shown in Figs. 6 and 8.

The inner or bearing end of each pin 24 is rounded, so as to enable it not only to snugly enter within the correspondingly-shaped recess cut in the disk, but be readily disengaged therefrom when a rotative movement of the disk tends to force the pin outward, aided by its spring against the pressure exerted by the operator as he turns the disk D or E with one hand and feels the passing recesses with the other.

The jamb of the door is cut away to receive an electromagnet M, and its pivoted armature 69 extends upward to about the center of the lock, with its free end in line with the bolt G. At its extreme upper end the armature 69 carries a keeper 70, which extends through the jamb of the door and projects beyond the outer end of the bolt G, being held normally in this position by a spring 71, this keeper then engaging or intercepting the bolt G and a lug 80 on the face of the lock, thus acting to lock the door closed or prevent its being opened. As the outer end of the bolt G is in line with the outer casing of the lock a recess 72, extending from the lug 80, is formed in the outer casing of the lock (see Fig. 2) to allow the keeper 70 to project inwardly from the jamb beyond the end of the bolt and also permit it to be unobstructedly passed, if need be.

To free the bolt G and lug 70 mechanically to unlock the door, the ordinary door-knob 62 has a spindle 63 extending from the inner surface of the door to the outer casing of the lock, and its spindle 63 passes through an elongated slot 67 in the bolt G and is provided with a dog 64, that engages in a notch 68, with which the bolt G is provided, by which arrangement the bolt may be thrown inwardly to admit of the door being opened from the inside.

The lock is provided with means for making and breaking an electrical circuit by which this magnet M may be energized to perform the unlocking operation, as follows: Conducting contact-springs 52, 53, 54, 55, 56, 57, and 58 58 are arranged within the lock-casing at suitable points for operation, as follows: The springs 53 54 contact at suitable times with the opposite ends of the conductor-bar 31, that extends across the upper non-conducting disk 29 and otherwise run in contact with its non-conducting periphery. The spring 55 is positioned so as to contact with the periphery of the conductive disk D and at times rests upon its insulating-plug 26. The spring 56 contacts at suitable times with the conductor-bar 32, that extends from the periphery of the lower disk 29 to its spindle 28, and otherwise runs in contact with the non-conducting periphery of that disk. The spring 57 is positioned so as to contact with the periphery of the conductive disk E and at times rests upon its insulating-plug 26. The springs 58 58 are

arranged to constantly press upon the spindles 28 28 and are connected by the wires *m p*. The spring 52 is so positioned within the lock-casing that it may be engaged by a push-button 51, that is mounted in the door, so that it may be moved inwardly to perform that duty.

A battery X, placed in a suitable adjacent locality, is connected by a conductor *q* with the magnet M, and thence by a conductor *o* to the contact-spring 53. The contact-spring 54 is connected by a conductor *n* with the contact-spring 56, and the spindles 28 28 of the disks are connected, respectively, by contact-springs 58 58 through conductors *m p*, which latter connect by a wire *l* with the contact-spring 52. The contact-springs 55 57 are connected together by conductors *s t*, and the conductor *s* connects through magnet N of an alarm-bell, and thence to the battery X.

The electrical operation of the lock will now be explained. As illustrative of the mode of setting the combination of the lock the operative numbers selected are "4" for the disk D and "12" for the disk E. The cap H is first removed to expose the dial-plate 46 and the wheel 43. The screw 73 is then loosened to enable the wheel 43 to be withdrawn far enough to release its pin 44 from engagement with the dial-plate and permit its rotation. The knob 62 will then be turned to the left (see Fig. 3) and through its spindle and lug 64 will draw the bolt G inwardly, and through its shoulders 37 this movement of the bolt G will swing the bars 36 and each dog 35 from engagement with the ratchet-wheel 34, thus permitting the disks D and 29 to rotate freely, and while this knob is held the wheel 43 is withdrawn and turned to the left until a proper position indicated by the pointer is reached for its pin 44 to enter the hole numbered "4" in the dial 46, whereupon the screw 73 is returned to fasten the parts in place and the knob is released. In thus turning the wheel 43 to the left it carries with it the disk 42 and its stop 41, and as the ratchet-wheel 34, together with the disk 29, are then free to revolve, impelled by the action of the spring 39, they will rotate (the pin 40 following the stop 41) until the point is reached at which the stop 41 is arrested by the pin 44 on the wheel 43 engaging with the selected hole in the dial-plate 46. This sets disk D on number "4," and the disk E is set in precisely the same manner, as illustrated, its controlling number selected being "12." The point or numbered hole of the dial-plate 46 at which the pin 44 is inserted becomes the initial point for its disk—viz., "4" for disk D and "12" for disk D—the stop 41 occupying a correspondingly-relative position and becoming the initial point, and it is from this initial point that the step-like movements of each disk must be made equal numerically to the number upon which the disk is set to bring that disk into operative position to enable the unlocking operation to be performed.

To perform this unlocking operation, the operator gently pressing the pin 24 inwardly by one hand with the other rotates the companion disk by means of the knob 50, and while doing so the in-and-out movement of the pin 24, as it enters and leaves the recesses in the disk, enables him to count the number of recesses passing the pin. He continues to rotate the disk until four of these openings have passed the pin, "4" being the combination-number of the disk D. By stopping this movement of the disk after four openings have thus passed the pin 24 will bring the insulating-block or circuit-breaker 26 of disk D into engagement with the contact-spring 55, and as the non-conducting disk 29 is rotated with the disk D it will also bring the opposite ends of the conducting-bar 31, which is carried by the disk 29, into engagement with the spring-contacts 53 54. The disk D is now held in this position against the returning action of the spring 39 by the dog 35 of the bar 36. The operation of the disk E is the same as that of disk D, except that twelve of the openings must pass the pin 24, that being the illustrative combination-number for the disk E. The rotative movement of the disk E, however, brings its circuit-breaker 26 into engagement with spring-contact 57, and its companion non-conducting disk 29, rotated with it, brings the conducting-bar 32, carried by the disk 29, into engagement with contact-spring 56. The mechanical combination is now complete and the circuit-conductors properly set to accomplish the electrical unlocking action. The circuit-maker or push-button 51 now being pressed makes contact with plate 52 and closes the circuit which is then established from the battery *x* through wires *l m*, spindle 28 of disk E, bar 32 of lower disk 29, contact-plate 56, wire *n*, contact-plate 54, bar 31 of upper disk 29, contact 53, wire *o*, keeper-operating magnet M, and wire *q* to battery *x*, as shown diagrammatically in Fig. 9. The electric circuit thus established energizes the magnet M, which attracts the armature 69 and draws the keeper 70 out of engagement with bolt G, thus freeing the lock and allowing the door to be opened. The person entering the doorway will then turn the knob 62, so as to throw the spring-pressed bolt G back, the shoulders 37 of the bolt then operating to swing the bars 36 and throw the dogs 35 out of engagement with ratchet-wheels 34, thus breaking the circuit and allowing the disks D E and their companion disks 29 29 to be returned by their springs 39 to the initial points limited by the stops 41 and the keeper 70 returned into engagement with the bolt.

Should the person rotating the disk D E by means of the knobs 50 make a mistake in setting either of the disks by turning it beyond the proper number, he may return said disk to its initial position by rotating the finger-piece 24 corresponding thereto so as to rock the bar 36 out of engagement with the

ratchet 34, when the disk D or E, as the case may be, will return to its initial position by the spring 39. The connections for so moving the bar or bars 36 upon the rotation of the finger-piece 24 consist, as before stated, of the rock-arm 25, connected to said finger-piece, and the link 61, connecting said rock-arm with the bar 36.

In any of the cases stated below should the circuit-closer or push-button 51 be pressed the alarm-bell O will ring if the door is locked and the combination off. If the disk E is on the right combination and disk D is on the wrong combination, the circuit will be closed through the wires *l p*, leading to the stud 28 of disk D, through that disk to contact 55 and a wire *s* to bell-magnet N, and thence to battery *x*. If disk D be on the right combination and disk E on the wrong combination, the circuit is closed through wires *l m*, stud 28 of disk E, through that disk to contact 57, through wires *t s* to bell-magnet N, and thence to battery *x*.

It will be observed that this construction of lock is such that when the bolt is in locking position the locked condition is maintained solely by the outward protrusion of the keeper and that when said keeper is withdrawn the door carrying the lock is free to be opened notwithstanding the protruded position of its bolt. So constructed no matter how the bolt mechanism is thrown into position for locking the door—as, for instance, by an ordinary key—the unlocking may be accomplished by the movement of the keeper through the electrical appliances, whereby upon making circuit to energize the keeper-operating magnet M the unlocking may be effected.

What is claimed is—

1. The combination with the boltwork of the lock and coöperating keeper, an electromagnet for operating said keeper, a battery supplying the current and conductors for conveying it, of a combination mechanism within the lock for making the circuit between the battery and magnet hand-operated from the outside, and an exterior push-button for completing the circuit, substantially as described.

2. The combination with the boltwork of the lock and coöperating keeper, an electromagnet for operating said keeper, a battery supplying the current and conductors for conveying it, of a combination mechanism within the lock for making the circuit between the battery and magnet hand-operated from the outside, an exterior push-button for completing the circuit, an alarm-bell, magnet and wires connecting the battery with the combination mechanism and its conductors, leading to battery, whereby when the said combination mechanism is improperly set and the circuit is made, said alarm-bell will be rung, substantially as described.

3. In an electrically-operated lock, the combination mechanism for switching the current-conductors consisting of a rotative disk provided with a conductive bar, contact-plates coöperating therewith, means for setting the disk for contact with said plates, countersunk index-points on said disk and a reciprocating feeling-pin coöperating from the outside with said index-points to determine when in the rotation of said disk its operative position has been reached, substantially as described.

4. In an electrically-operated lock, the combination mechanism for switching the current-conductors consisting of a rotative disk provided with a conductive bar, contact-plates coöperating therewith, means for setting the disk for contact with said plates, countersunk index-points on said disk, a reciprocating feeling-pin coöperating from the outside with said index-points to determine when in the rotation of said disk its operative position has been reached, an electrically-operated alarm apparatus connected therewith through contact-plates, and an insulating-plug in said disk to cut out said alarm when the correct combination adjustment exists, substantially as described.

5. In an electrically-operated lock, the combination mechanism for switching the current-conductors consisting of two rotative disks each provided with a conductive bar, contact-plates coöperating therewith, means for setting the disks for contact with said plates, countersunk index-points on said disks, reciprocating feeling-pins coöperating from the outside with said index-points to determine when in the rotation of said disks their operative positions are attained, substantially as described.

6. In an electrically-operated lock, the combination mechanism for switching the current-conductors consisting of two rotative disks each provided with a conductive bar, contact-plates coöperating therewith, means for setting the disks for contact with said plates, countersunk index-points on said disks, reciprocating feeling-pins coöperating thereon outside with said index-points to determine when in the rotation of said disks their operative positions are attained, an electrically-operated alarm apparatus connected therewith through contact-plates, and insulating-plugs in the peripheries of said disks to cut out or insulate said alarm apparatus when the correct combination exists, substantially as described.

7. The combination with a door-lock and an electric circuit for operating the same, of a hand-operated combination mechanism in said circuit comprising a movable member provided with means for indicating the position of the combination mechanism, and an indicating finger-piece on the outer side of the door yieldingly coacting with said member, substantially as described.

8. The combination with a door-lock and an electric circuit for operating the same, of a hand-operated combination mechanism in

said circuit comprising a rotative disk provided with means for indicating the position of the combination mechanism, and an indicating finger-piece on the outer side of the door yieldingly coacting with said disk, substantially as described.

9. The combination with a door-lock and an electric circuit for operating the same, of a hand-operated combination mechanism in said circuit comprising a movable member provided with means for indicating the position of the combination mechanism, an indicating finger-piece on the outer side of the door yieldingly coacting with said member, and a circuit-closer hand-operated from the outer side of the door, substantially as described.

10. The combination with a door-lock and an electric circuit for operating the same, of a hand-operated combination mechanism in said circuit comprising a rotative disk provided with means for indicating the position of the combination mechanism, an indicating finger-piece on the outer side of the door yieldingly coacting with said disk, and a circuit-closer hand-operated from the outer side of the door, substantially as described.

11. The combination with a door-lock and an electric circuit for operating the same, of a hand-operated combination mechanism in said circuit comprising a movable member provided with means for indicating the position of the combination mechanism, an indicating finger-piece on the outer side of the door yieldingly coacting with said member, a circuit-closer for said circuit hand-operated from the outer side of the door, a branch circuit closed thereby when the combination mechanism is improperly set, and an alarm mechanism in said branch circuit, substantially as described.

12. The combination with a door-lock and an electric circuit for operating the same, of a hand-operated combination mechanism in said circuit comprising a rotative disk provided with means for indicating the position of the combination mechanism, an indicating finger-piece on the outer side of the door yieldingly coacting with said member, a circuit-closer for said circuit hand-operated from the outer side of the door, a branch circuit closed thereby when the combination mechanism is improperly set, and an alarm mechanism in said branch circuit, substantially as described.

13. The combination with the boltwork of a door-lock and an electric circuit for operating the same, of a combination mechanism in said circuit comprising a plurality of independently-rotative disks each bearing contact portions controlling said circuit, hand-operated means adapted to extend outside the door for rotating the disks to close the circuit, and an alarm-circuit also controlled by said disks and closed when the combination is improperly set through any disk, substantially as described.

14. The combination with the boltwork of a door-lock and an electric circuit for operating the same, of a combination mechanism in said circuit comprising a plurality of independently-rotative disks each bearing contact portions controlling said circuit, hand-operated means adapted to extend outside the door for rotating the disks to close the circuit, an alarm-circuit also controlled by said disks and closed when the combination is improperly set through any disk, and an additional circuit-closer, hand-operated outside the door, for said circuits, substantially as described.

15. The combination with the boltwork of a door-lock and an electric circuit for operating the same, of a combination mechanism in said circuit comprising a plurality of rotative disks each bearing contact portions controlling said circuit, hand-operated means adapted to extend outside the door for rotating the disks to close the circuit, an alarm-circuit also controlled by said disks and closed when the combination is improperly set through any disk, means for retaining each disk in the position to which it is moved to close the circuit and means for returning it to normal position when released, substantially as described.

16. The combination with the boltwork of a door-lock and an electric circuit for operating the same, of a combination mechanism in said circuit comprising a plurality of rotative disks each bearing contact portions controlling said circuit, hand-operated means adapted to extend outside the door for rotating the disks to close the circuit, an alarm-circuit also controlled by said disks and closed when the combination is improperly set through any disk, an additional hand-operated circuit-closer also adapted to extend outside the door, means for retaining each disk in the position to which it is moved to close the circuit and means for returning it to normal position when released, substantially as described.

17. The combination with the boltwork of a door-lock and an electric circuit for operating the same, of a combination mechanism in said circuit comprising a plurality of rotative disks each bearing contact portions controlling said circuit, hand-operated means adapted to extend outside the door for rotating the disks to close the circuit, an alarm-circuit also controlled by said disks and closed thereby when the combination is improperly set through any disk, means for retaining each disk in the position to which it is moved to close the circuit, hand-operated means adapted to extend outside the door on opposite sides thereof for releasing the disk, and means for returning it to normal position when released, substantially as described.

18. The combination with the boltwork of a door-lock and an electric circuit for operating the same, of a combination mechanism in said circuit comprising a plurality of rotative disks each bearing contact portions controlling said circuit, hand-operated means adapted to extend outside the door for rotating the disks to close the circuit, an alarm-circuit also con-

trolled by said disks and closed when the combination is improperly set through any disk, an additional circuit-closer, hand-operated outside the door, for said circuits, means for retaining each disk in the position to which it is moved to close the circuit, hand-operated means adapted to extend outside the door on opposite sides thereof for releasing the disk, and means for returning it to normal position when released, substantially as described.

19. The combination with the boltwork of a door-lock and an electric circuit for operating the same, of a combination mechanism in said circuit comprising a plurality of independently-rotative disks each bearing contact portions controlling said circuit, hand-operated means adapted to extend outside the door for rotating the disks to close the circuit, an alarm-circuit also controlled by said disks and closed when the combination is improperly set through any disk, and adjustable means for each disk determining its initial position, substantially as described.

20. The combination with the boltwork of a door-lock and an electric circuit for operating the same, of a combination mechanism comprising a rotative switch controlling said circuit, hand-operated means adapted to extend outside the door for rotating the switch in one direction to close the circuit, a spring for returning it to its initial position, and adjustable means determining the initial position of the switch, substantially as described.

21. The combination with the boltwork of a door-lock and an electric circuit for operating the same, of a combination mechanism comprising a rotative switch controlling said circuit, hand-operated means adapted to extend outside the door for rotating the switch in one direction to close the circuit, a spring for returning it to its initial position, and an adjustable stop determining the initial position of the switch, substantially as described.

22. The combination with a door-lock and an electric circuit for operating the same, of a hand-operated combination mechanism in said circuit comprising a movable member inside the door and a member coacting therewith inside the door, one member yieldingly engaging the other so as to resist step by step the movement of the movable member and thus indicate the position of the combination mechanism, substantially as described.

23. The combination with a door-lock and an electric circuit for operating the same, of a hand-operated combination mechanism in said circuit comprising a rotative disk inside the door, and a member yieldingly coacting with said disk so as to resist step by step its movement and thus indicate the position of the combination mechanism, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HENRY GUY CARLETON.

Witnesses:

T. F. KEHOE,

A. L. KENT.