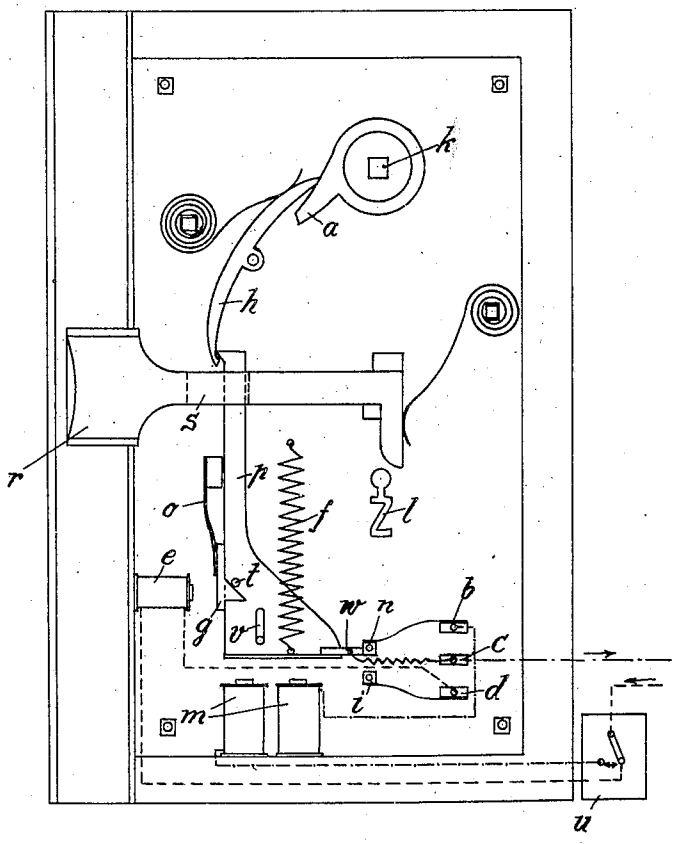
June 21, 1932. W. ROSENBAUM 1,864,474

ELECTRIC LOCK

Filed Feb. 25, 1930



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Patented June 21, 1932 1,864,474

UNITED STATES PATENT OFFICE

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ELECTRIC LOCK

Application filed February 25, 1930, Serial No. 431,205, and in Germany November 29, 1928.

This invention relates to an arrangement by means of which a locking of the door lock is effected automatically for certain hours with the aid of an electric switch clock so that the operation of the latch bolt by the door handle is prevented and the latch bolt can only be actuated with the aid of a key. The feature of the invention consists in that the switch slide controlling the latch bolt and connected with the rollback by means of a double lever can be automatically rendered inoperative by means of solenoids connected up in the circuit of an electric switch clock, so that the latch bolt cannot be disengaged by the handle and can only be operated with a key.

An embodiment of the invention is illustrated by way of example in the only figure of the accompanying drawing.

The lock consists in known manner of a latch bolt r having a cut out portion s, a rollback k with lever arm a, a spring actuated two-armed lever h, a switch slide p with a pin t, a guide slot v and spring f, a pawl g controlled by spring o, a switch clock u, coils m, terminals b, c, d springs n and i, a switch lever w and a coil e.

The operation is as follows:

The latch bolt r is generally actuated by pressing down the handle, when the lever arm a on the rollback k presses back the spring pressed two-armed lever h. The switch slide p in the cut out portion s of the latch bolt r is also pushed back by this double lever h against which it rests and the latch bolt r actuated, i. e. pulled back. As long as the switch slide p is in its normal position the pulling back and pushing forward of the latch bolt r is effected exclusively by means of the handle, that is by actuating the rollback, so that a key is not required. If however the coils m be switched in the circuit by the switch clock u, the current flows from the clock through the coils m, as shown in dot-dash lines, to the terminal b, thence to the contact n and to the switch w bearing at this point and rigidly connected to and insulated in the switch slide p, and thence back to the source of current through a wire yieldably connecting the switch to the terminal c, so that the circuit is closed and the iron cores in the coils m are magnetized, and attract the switch slide p. The switch lever w on this switch slide p is at the same time actuated and breaks the contact at n and makes contacts with i. Through this changing over the circuit to the coils m will be changed over to the coil e switched out. The pin t in the switch slide p comes to rest under the spring controlled pawl g and the switch slide p is disengaged from the double lever h so that it is no longer possible to actuate the latch bolt r by the handle. To actuate the latch bolt r a key must be introduced into the key hole l and turned.

As soon as the clock switches over, that is sends current as shown in the dotted line, to the coil e the pawl g is attracted by the iron core of this coil. The pin t on the switch slide p which was situated under the nose of the pawl g is thereby released, and the slide p is pulled up again into its initial position by the action of the spring f. The switch lever w is thereby separated from contact i and again connected with the contact n cutting out the coil e and connecting up the coils m ready to be again operated by the switch clock u.

The circuits are arranged so that the coils m and e are only under current during the switching over period. It is further possible to arrange the switch slide p in horizontal position instead of vertical.

The advantages of the arrangement above described consist in that it is possible to automatically secure the lock against unauthorized operation at predetermined times without personal supervision or locking. It is only necessary to set the switch clock to a certain time when the arrangement comes automatically into operation.

I claim:—

1. An electric time switch lock, comprising in combination a latch bolt having a slot, a switch slide extending through the slot in and shiftable at right angles to said latch bolt, a two-armed lever engaging with one arm the upper end of said shiftable bolt, a roll-back bearing upon the other arm of said lever, adapted to pull back said latch bolt

through the intermediary of said rocker lever and said shiftable bolt, a spring tending to pull said switch slide in upward direction, an electromagnet adapted to pull said shiftable bolt in downward direction against the action of said spring and out of contact with said two-armed lever, a pin on said shiftable bolt, a resilient pawl adapted to engage said pin and hold said switch slide out of engagement with said two armed lever, a second electromagnet adapted to shift said pawl out of engagement with said pin and allow said switch slide to be returned into engagement with said two-armed lever by said spring, and a switch adapted to actuate both of said electromagnets for the desired period of time.

2. An electric time switch lock, comprising in combination with two electromagnets, a switch slide and a pawl locking said switch bolt, a switch lever on said switch slide adapted through the intermediary of said switch slide to automatically close the circuit to the electromagnet controlling said pawl and to break the circuit to the electromagnet acting on said switch slide during the switching out of said switch slide, and during the switching in of said switch slide to close the circuit to the electromagnet controlling said switch slide and to break the circuit controlling said pawl.

In testimony whereof I affix my signature.

WILHELM ROSENBAUM.