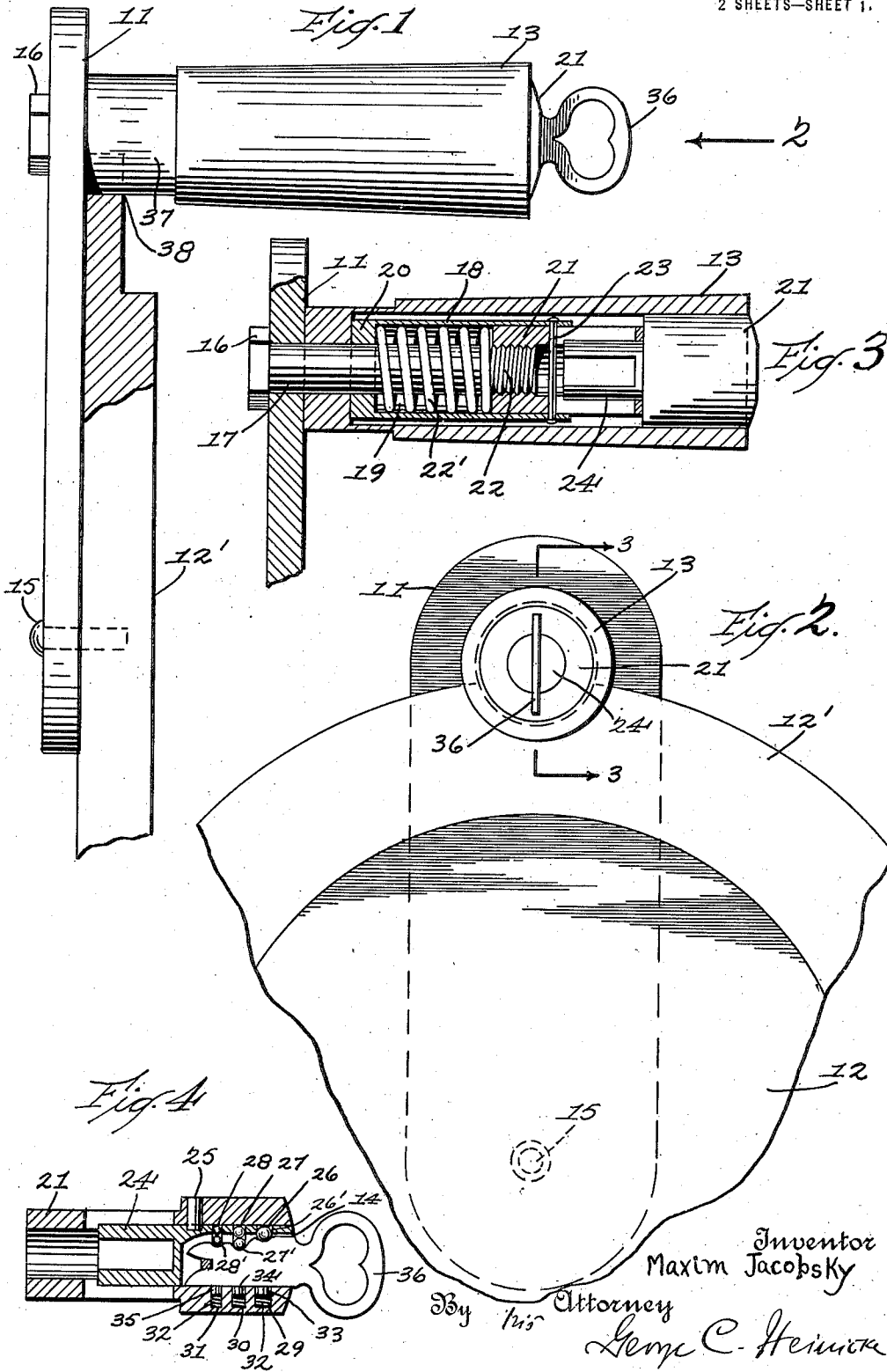


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 APPLICATION FILED MAR. 23, 1921.

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Patented Nov. 29, 1921.  
 2 SHEETS—SHEET 1.



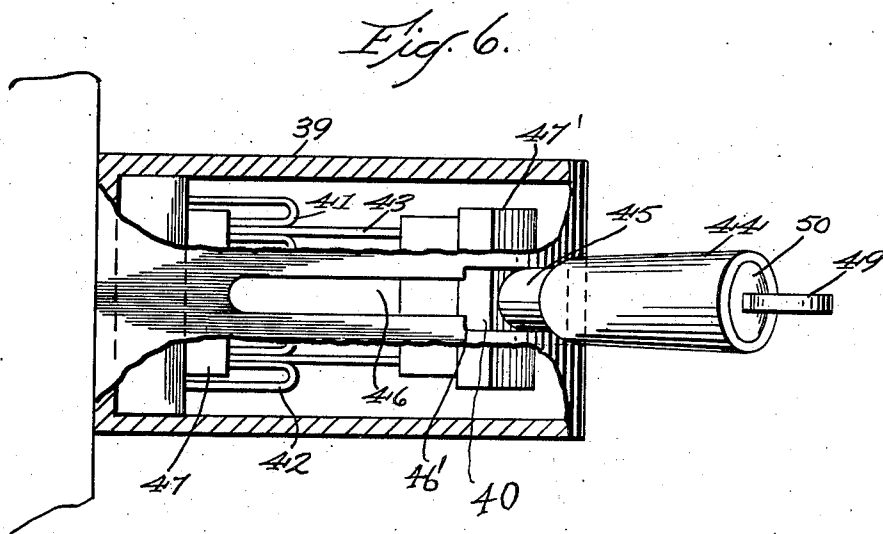
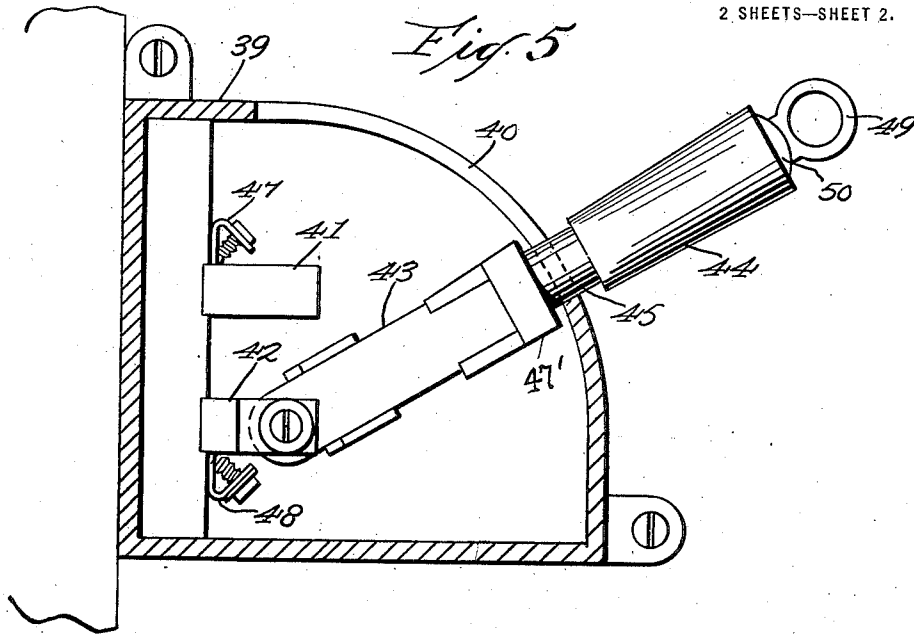
Inventor  
 Maxim Jacobsky  
 By *Lemp C. Heinicke* Attorney

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Maxim Jacobsky  
 By his Attorney  
 George C. H.

# UNITED STATES PATENT OFFICE.

MAXIM JACOBSKY, OF NEW YORK, N. Y.

LOCKING DEVICE FOR OPERATING-HANDLES.

1,398,232.

Specification of Letters Patent. Patented Nov. 29, 1921.

Application filed March 23, 1921. Serial No. 454,694.

*To all whom it may concern:*

Be it known that I, MAXIM JACOBSKY, a citizen of Ukraine, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Locking Devices for Operating-Handles, of which the following is a specification.

This invention relates to improvements in devices for preventing accidents, particularly accidents caused by an attempt made by an unauthorized person to run an electrically operated elevator during the absence of the attendant.

More particularly, my invention relates to a lock for locking the controller handle of an electrically operated lift or elevator.

It is the object of the invention to provide a lock which allows the operation of an elevator while the key is in the lock however positively prevents its operation when the key is removed from the key-hole of the lock.

A further object of the invention is the provision of a simple, yet durable and positively acting lock of this character which may also advantageously be used for locking levers of electric switch boxes.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed; it being understood that changes may be made in the precise embodiment of the invention herein disclosed within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, in which—

Figure 1 is a side view of the handle and lever of an elevator controller equipped with a lock constructed according to the present invention.

Fig. 2 is a front view thereof, looking in the direction of the arrow 2, Fig. 1.

Fig. 3 is a longitudinal section through the controller handle along line 3—3 of Fig. 2.

Fig. 4 is a longitudinal section through an inner sleeve.

Fig. 5 illustrates in side elevation, partly in section the application of my locking device to lock the lever of an electric switch box, and

Fig. 6 is a top plan view thereof partly in section.

The handle of a controller lever 11 for the

box 12 of an electrically operated elevator comprises an outer sleeve 13 having the usual form. The lever 11 is pivoted as at 15, near its lower end to a stationary part 12' of the box 12, while its outer face, near the upper end thereof, is engaged by a nut 16 which is secured to the outer end of a bolt 17 extending into a sleeve 18 within the handle 10.

This sleeve has an inner chamber 19 closed at one end by a head 20, while its opposite end is closed by the end of a sleeve 21 provided with inner screw thread adapted to be engaged by the outer screw threaded part 22 of the inner end of bolt 17. Within the chamber 19, a spiral spring 22' is wound around the bolt 17 and rests with one end against the head 20 and with the other against the end of stationary sleeve 21.

The sleeve 21 has longitudinal grooves in its upper and lower walls in which the shank of a pin 23 passed through sleeve 18 travels, which pin has heads on its ends resting against the upper and lower outer faces of the sleeve 18 so that the sleeve 18 can execute a limited sliding movement on sleeve 21.

In the outer end of the sleeve 21, a spindle 24 is working provided with a key hole 14 in its outer headed end and which is rotatably connected by means of a pin 25 to the sleeve 21. The lower end of the pin is suitably guided in the upper wall of said sleeve. The spindle 24 is thereby rotatably held in said sleeve and forked at one end, it is also provided with three sockets 26, 27, 28 or bearings in its inner wall for the reception of balls which are placed into these sockets through suitable openings in the upper wall of the spindle.

Within socket 26 one wall 26' and within each of sockets 27, and 28 two balls 27' and 28' are arranged in superposition. The opposite wall of the sleeve 21 has also three sockets 29, 30 and 31 in which springs 32 are located upon which studs 33, 34 and 35 are resting. The number of balls and studs must correspond to the number of recesses and depressions in the edge of a key 36 adapted to be introduced through key-hole 14.

The sleeve 13 has a reduced part 37 which rests between the forks 38 at the upper end of the stationary part 12' which are of a length to prevent the operation of the lever by the handle when the same is in its position of rest shown in Fig. 1, but which allow the passage of bolt 17 when the handle is in its restricted position.

The device or lock operates as follows—

Assumed the lock is in its locked position shown in Fig. 1, in which the reduced part 37 of the handle will rest between the forks 38 of the stationary part 12', and it is desired to unlock the same. The elevator operator possessing the key 36 will place the same into the key-hole 14 and turn the spindle 24 so that its forked end allows the entrance of pin 23 between the prongs of the fork when the handle is drawn toward the right against the action of spring 22' so that its reduced end is drawn out from between the prongs of the fork 38, and the lever 11 can now be operated by means of the handle as the bolt 17 is clearing the upper end of the fork. A withdrawal of the key from the lock in this position is prevented by the entrance of the balls into the recesses of the key.

When it is now desired to lock the handle again, the key and spindle 24 are turned until the forked end of the spindle is disengaged from pin 23, so that the spring can now expand and move the handle 13 toward the left with its reduced end 37 between the prongs of the fork 38, whereafter the key can be withdrawn from the key-hole 14 as the balls will now depress the spring controlled studs in the sockets of the sleeve 21 and allow a withdrawal of the key.

Figs. 5 and 6 illustrate the application of my invention to a switch box 39 which is provided with the usual slot 40 in its upper face. In its interior the box is provided with the customary, pairwise arranged clip contacts 41 and 42. To the lower of these contacts, 42, a forked switch lever 43 is pivotally secured so that it can be operated by means of the handle 44 secured to a head 47' on lever 43 for closing the switch by engagement of lever 43 with contact 41. This handle has a reduced part 45, similar to the reduced part 37, and the slot 40 is reduced to form a narrow part 46 and shoulders 46', adapted to be normally engaged by the part 45. Pole screws 47 and 48 are provided in the well known manner near the contact 41 and 42. The handle 4 is constructed in its interior exactly as handle 13, and its spindle 50 is adapted to be operated by a key 49 in the manner above described with respect to key 36 and spindle 24.

The operation of the device or lock applied to the handle 44 is exactly the same as the operation of the handle 13 and co-acting parts described above.

What I claim as new and desire to secure by Letters Patent of the United States, is—

1. A lock of the character described comprising a stationary fork, a controller lever, a hollow handle having a reduced end, a

bolt passed into said handle and secured to said lever, a sleeve within said handle connected therewith, means for, normally holding said handle on said bolt in its forward position with its reduced end between the prongs of said fork, means for locking the handle in this position, and means for permitting a withdrawal of said handle and of its reduced end from between the prongs of said fork, for allowing an operation of the controller by said bolt and handle.

2. In a lock of the character described, a hollow handle having a reduced end, a sleeve in said handle having a head, a fork between the prongs of which said reduced end normally rests, a second slotted sleeve having a screw threaded head, a controller lever, a bolt secured to said lever having a threaded end adapted to engage the thread of said head, a spring in said first named sleeve, a pin in said first named sleeve adapted to travel in the slot of said second sleeve and a third sleeve or spindle in said second sleeve having a forked inner end for the reception of said pin under the action of said spring while it is compressed during the withdrawal of said reduced end from its engagement between the prongs of said fork for allowing an operation of the controller lever by said bolt adapted to clear the upper ends of said fork and by said handle, and means for locking and unlocking the parts in their respective positions.

3. In a lock of the character described, a bolt having a screw threaded end, a controller lever to which the opposite end of said bolt is secured, a hollow handle on said bolt having a reduced part, a fork on the controller for the reception of the reduced end of said handle when the handle is locked in its inoperative position with its reduced end between the prongs of said fork, a means for locking said handle in this position and a means for allowing a withdrawal of the handle on said bolt to disengage its reduced end from between the prongs of said fork for allowing an operation of said controller lever by the bolt clearing the upper ends of the prongs of said fork, means for locking the parts in their operative and inoperative positions, and means for allowing a withdrawal of the key operating the lock when said parts are in their inoperative position with the reduced end of said handle between the prongs of said fork to prevent the operation of the controller lever by an unauthorized person.

In testimony whereof I have affixed my signature.

MAXIM JACOBISKY.