

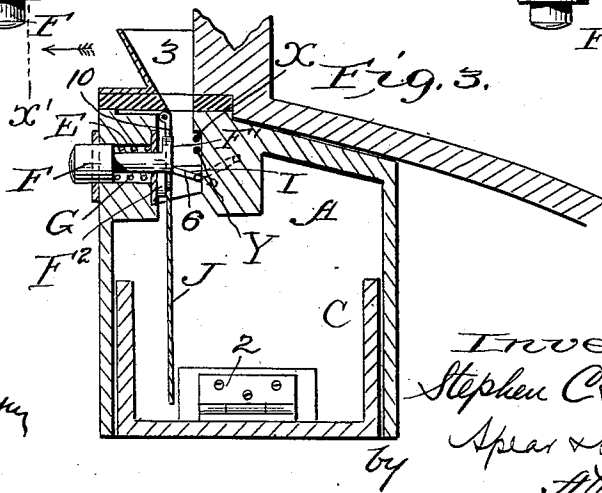
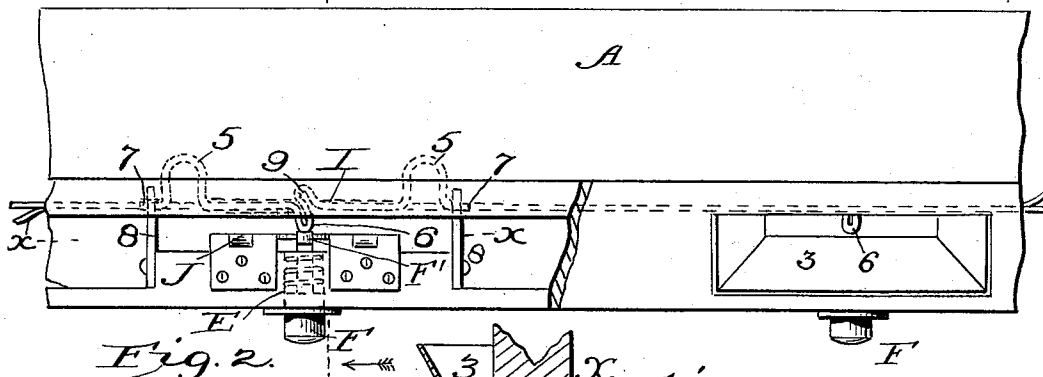
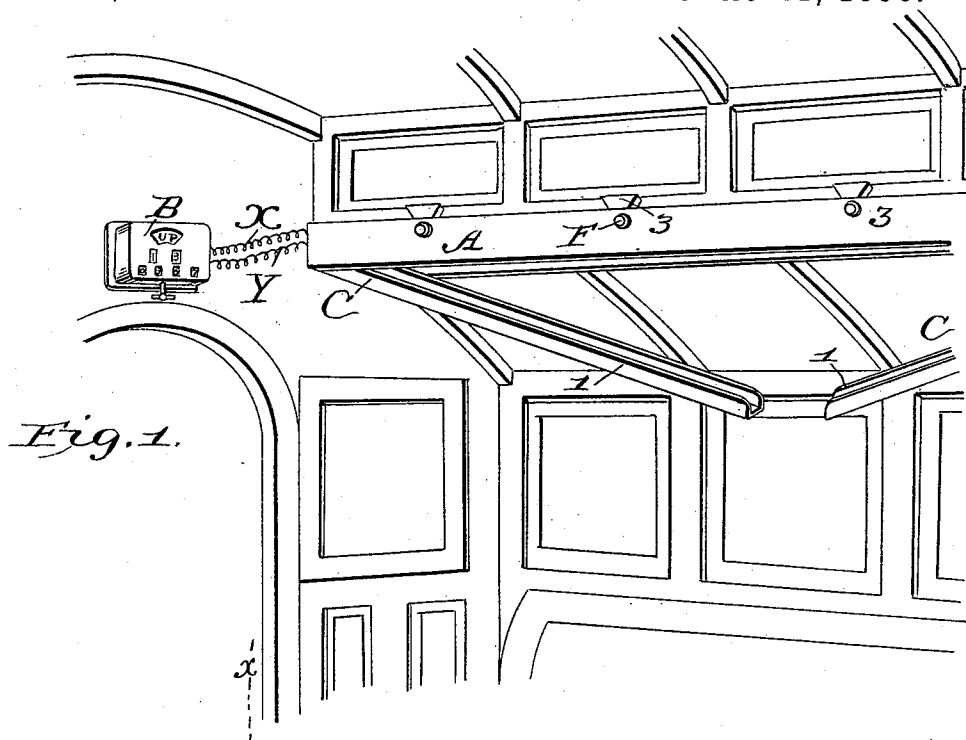
(No Model.)

2 Sheets—Sheet 1.

S. C. HOUGHTON.
COIN OR TICKET ACTUATED LOCK.

No. 540,666.

Patented June 11, 1895.



Attest
Walter M. Mullen
J. L. Minton

Inventor
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Atty's

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

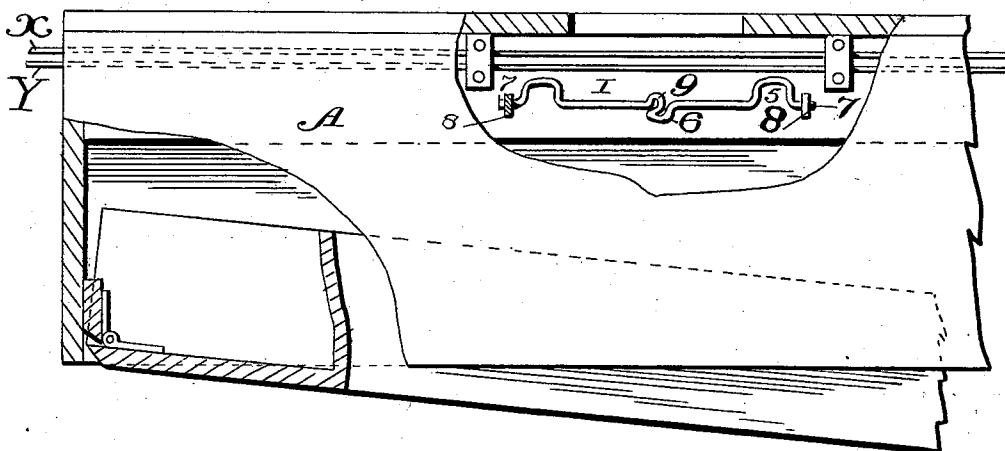


Fig. 5.

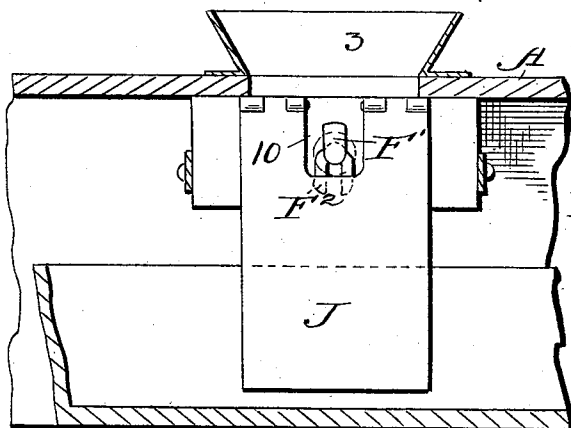


Fig. 6.

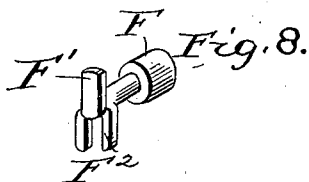
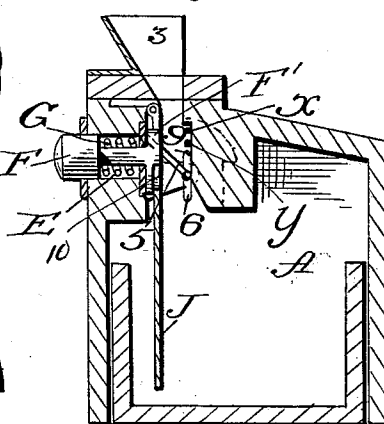


Fig. 8.

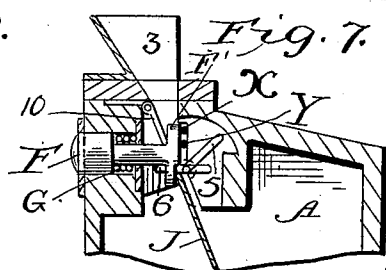


Fig. 7.

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UNITED STATES PATENT OFFICE.

STEPHEN C. HOUGHTON, OF SAN FRANCISCO, CALIFORNIA.

COIN OR TICKET ACTUATED LOCK.

SPECIFICATION forming part of Letters Patent No. 540,666, dated June 11, 1895.

Original application filed August 18, 1894, Serial No. 520,691. Divided and this application filed December 5, 1894. Serial No. 530,850. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN C. HOUGHTON, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Coin or Ticket Actuated Locks; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to that class of devices in which a locked mechanism, such for example as a register or recorder or indicator, is unlocked by the dropping of a coin, ticket or check of any kind into a receiving box, so as to enable it to be operated.

In carrying out my invention, I provide the receiving box with a normally closed lock opened by the dropping of a coin or the like, and automatically reset; an open electrical circuit to the mechanism to be operated, and a circuit closer which operates the particular mechanism by means of the circuit.

In describing and illustrating my invention, I have shown it as applied to a fare box for railway cars in connection with a suitable fare register, and electrical connections for operating such register. My circuit closer, and my self-setting lock for the same, can be used with various different kinds of so called "coin-operated" mechanisms, and hence their particular embodiment in this description and the accompanying drawings, is illustrative of only one mode of applying them.

Figure 1 is a perspective of the interior of a street-railway car with my box in position and with the bottom of the box made in two sections and dropped for the recovery of the contents. Fig. 2 is a top plan view illustrating the construction of the circuit-closer and lock at a point of deposit, the left-hand portion having the top plate and hopper removed. Fig. 3 is a cross-section on line $x'x'$ of Fig. 2, showing the device locked. Fig. 4 is a broken front elevation. Fig. 5 is a rear elevation at a point of deposit, showing the position relatively to the contact end of the push-button. Fig. 6 is a cross-section showing the device unlocked. Fig. 7 is a similar section showing the position of the parts when the push-button is pressed inward and the circuit closed.

Fig. 8 is a detail perspective view of the push-button.

In an application for patent filed August 18, 1894, Serial No. 520,691, of which the present case is a division, I showed a peculiar construction of a fare receiving box for railway cars. For convenience I show the same box in the present case, although its construction forms no part of the present invention. Any kind, shape, or size of box may be substituted, containing the special devices which form the subject matter of this application.

The box A, shown in the drawings, is provided with one or more movable or hinged bottoms C, provided with side pieces 1, to retain the contents when such bottom is lowered to collect the contents. The box is provided on top, or at its front if preferred, with one or more deposit slots or hoppers 3, through which coins, checks, tickets, &c., can be dropped.

B, is a conventional illustration of a fare register placed within the car. Wires X, Y, in the interior of the box, are placed in open circuit with this register and with a battery, and a circuit closer is employed, which is normally locked; but when a ticket has been deposited, it may be operated to close the circuit to the register, the lock being reset by the same operation. This construction is illustrated in Figs. 2, 3, 4, 5, 6, and 7. It will be understood that in using these long boxes, one of such circuit closers will be employed at each deposit slot or hopper. Therefore Fig. 2, may be considered as a broken plan of a long box. The fare register B, is connected with the battery by the wires X, and Y, extending through the box and car.

In the front wall of the box A, is a passage E, for the push button F. G, is a coil spring for holding the button in its normal position and returning it thereto. The inner end of the button forms a contact plate F' , and is provided with a fork F^2 , as shown in Fig. 8. Opposite the end of the push button and secured in any suitable manner, are the wires X, Y. The circuit through the register and battery is completed when the inner end of the button F, bears against these wires. This result is normally prevented by the pivoted lock I. This lock may be made of sheet metal, or of

a single length of wire bent or shaped as shown, so as to produce projections or loops 5—5, 6, and 9. The loop 6, ordinarily projects forward into the path of the push button and directly in vertical line with the slot or hopper. The ends of the lock, whether formed of sheet metal or of wire, are pivots or trunnions 7, and are journaled in standards 8, secured to the box. The projections 5—5 are, relatively to the projection or loop 6, at an obtuse angle, as shown in Figs. 3, 6, and 7. Normally, however, the loop 6, is in a nearly horizontal position, and forms a point of resistance when pressed by the button, and consequently a lock for the circuit closer. The weight of a ticket or coin dropped into the slot or hopper will disengage the lock by depressing the loop 6; thus enabling the conductor to press the button far enough to make contact with the wires X, Y, so as to close the circuit and operate the register. Before closing the circuit, the end of the button strikes the lock above its center of rotation, upon the projection 9, thus moving the lock sufficiently to cause the weight of the loops 5—5 to overbalance that of the loop 6, the latter loop being raised into contact with the lower side of the stem of the push button where it is held until the button has been retracted by the spring. The weight of the loops 5—5 then raises it to its ordinary position in front of the inner end of the button, thus locking the device again and preventing the closing of the circuit until another fare shall have been deposited.

In order to prevent the clogging of the box beneath the slot I have provided the hinged apron J, having the slot 10, through which the end of the push button projects when it makes contact with the wires X, Y. As shown in Fig. 7, this apron is pushed over when the button is pressed in, and clears the space beneath the slot or hopper. The fork F², allows the forward projection of the lock to pass, when the button is pushed inward.

It will be noted that this construction is marked by extreme simplicity, while, at the same time, it is perfectly effective. It will be understood that I do not limit its use to a box of the exact form described, so long as it acts as a lock for a circuit closer until its position is shifted by the depression of its locking projection.

What I claim is—

1. In coin-operated mechanism and in combination, a receiving box having a deposit slot, an open electrical circuit for operating such

a mechanism, a circuit closer operated from the outside of the box, and a pivoted self-setting lock normally in the path of such circuit closer, and in line with the deposit slot, substantially as described.

2. In combination with a receptacle for coins, tickets and the like, having a deposit slot, a circuit closer a lock in the path of said circuit closer, released by the dropping of such coin or ticket, and reset by the movement of such circuit closer, substantially as described.

3. In combination with a receptacle and with an open electrical circuit including a battery and a register, electrical contacts within the receptacle and an intermediate lock set normally in the path of the movable contact, and in line with the deposit slot in the receptacle, substantially as set forth.

4. In combination with a receptacle having a deposit slot, a sliding push button, an electrical open circuit connected with a register and a battery, an intermediate pivoted lock having a projection in the path of the push button and in line with the slot, said push button forming a circuit closer substantially as set forth.

5. In combination with a receptacle having a deposit slot, a sliding push button, a pivoted lock for said button having a projection 6 normally in the path of said button, but adapted to be depressed by the deposit of a fare, loops or projections 5—5 formed with said lock and placed at an angle with said projection 6, and the projection 9 forming a part of said lock and adapted to come into the path of the push button after the fare has been deposited substantially as described.

6. In a register, a locking device for the purpose set forth, composed of a single piece of metal having projections or loops 5—5 and 9 in combination with a fare box having a deposit slot, and a push button adapted to be alternately locked and released by said locking device substantially as described.

7. In a receiving box for coins, &c., having a deposit slot, a hinged slotted apron and a sliding push button adapted to pass through such slot and operate said apron, substantially as and for the purposes set forth.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 2d day of November, 1894.

STEPHEN C. HOUGHTON.

Witnesses:

JOHN COFFEE,
L. W. SEELY.