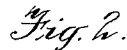
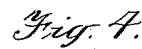
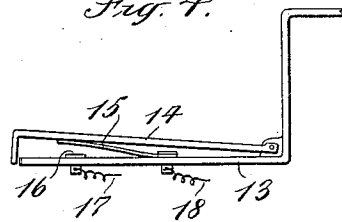


1,070,904.

Fig. 1.



By his Attorney Lewis J. Doolittle

UNITED STATES PATENT OFFICE.

GROVER C. MAXWELL, OF NEW YORK, N. Y., ASSIGNOR OF ONE-FOURTH TO WILLIAM H. DEBEUCKELAERE, ONE-FOURTH TO ADONIS C. DEBEUCKELAERE, AND ONE-FOURTH TO WILLIAM B. MAXWELL, ALL OF NEW YORK, N. Y.

SAFETY-LOCK.

1,070,904.

Specification of Letters Patent.

Patented Aug. 19, 1913.

Application filed January 12, 1911. Serial No. 602,262.

To all whom it may concern:

Be it known that I, GROVER C. MAXWELL, a citizen of the United States, and resident of the city of New York, county of Queens, State of New York, have invented certain new and useful Improvements in Safety-Locks, of which the following is a specification.

This invention relates to a device which has been designated as a safety lock.

The object of the invention is to provide a device primarily designed to be used in connection with the signal cord on a railway car to prevent the cord being pulled to give the starting signal while the circuit is closed through the operating magnet. When used in this connection a circuit closing device may be placed upon the step of the car so that the signal cord will be locked until the passenger leaves the step.

To accomplish these results in a simple and efficient manner the device illustrated in the accompanying drawings has been designed and the operation and features of the invention will be more fully explained in connection with the description of this device.

In the drawings like parts in the several views have been given similar reference numerals.

Figure 1 is a side elevation of a safety lock. Fig. 2 is a sectional end view taken on the line 2—2 of Fig. 1, looking in the direction of the arrows. Fig. 3 is a detailed view of a portion of the device illustrating a modification thereof. Fig. 4 is a view of a portion of the step of the car illustrating the circuit closing device.

A rectangular frame is provided composed of a bottom member 1, a top member 2 and end members 3 and 4. A sliding member 5 is positioned in the lower portion of this frame and is guided in slots in the end members 3 and 4 through which the same extends. A sliding locking member 6 is positioned against the end member 4 of the frame, held by the strap 7. The operating arm 8 is pivotally mounted in the frame upon a support 9 and engages the locking member 6 at one end thereof in the manner shown in Figs. 1 and 2. An electro-magnet 10 is mounted in the frame at the opposite end of the operating arm 8 and when current flows in the coils raises the operating arm to the

position shown in full lines in Fig. 1, thereby lowering the locking member 6 to the position shown. When the current ceases to flow in the electro-magnet 10 the spring 11 which is attached to the operating arm 8, as shown in Fig. 1, raises the same and the locking member 6 to the position shown in dotted lines in Fig. 1. The sliding member 5 is provided with a shoulder which engages the locking member 6 when the same is in its lower position and holds the sliding member against the movement in one direction, or in the position shown in full lines in Fig. 1. When the current ceases to flow in the electro-magnet 10 the operating arm 8 and the locking member 6 are raised by the spring 11, permitting the sliding member 5 to be moved to the right, as indicated in dotted outline, and when released the spring 12, which is attached at one end to the frame and at the other end to the sliding member 5, will move the sliding member 5 back to its original position.

In Fig. 3 a modified form of the sliding member 5 is shown at 5'. In this form a number of shoulders are provided which may be engaged by the locking member 6' to hold the sliding member in any one of several positions against movement in one direction. When in use in a car the device is mounted so that the sliding member 5 is connected to the bell cord so that when the cord is pulled to give the starting signal, the sliding member 5 is moved to the right and when the cord is released the spring 12 moves the same to the left, as shown in Fig. 1.

In Fig. 4 a circuit closing device is shown in connection with the step of the car 13. A hinged member 14 forming the tread of the step when pressed down by the weight of a person standing thereon closes the circuit between the spring contact 15 and the fixed contact 16. The operating current may be obtained from the line when used in connection with an electric car or from a storage battery or any other suitable source of current desired. The lines 17 and 18 are connected to the binding posts 19 and 20 and by means of suitable connections the current is carried to the electro-magnet coil 10.

It will thus be seen that as long as the circuit is closed by reason of a person standing upon the steps, either in the alighting from

or getting upon the car, the signal cord cannot be pulled to give the starting signal and thus the passenger is protected from injury by the too sudden starting of the car before
5 he has alighted therefrom.

It will be obvious that the device may be modified and adapted to various uses without departing from the scope of the appended claim.

10 What I claim is:

A safety lock comprising a rectangular frame, a sliding member positioned in the lower portion of said frame and having a plurality of shoulders, a stud on said sliding member, a spring connecting said stud
15 member to said frame, a strap on said frame, a sliding locking member positioned against

one end of said frame working through said strap and adapted to engage said shoulders, a support, an arm pivotally mounted on said support and engaging said locking member
20 at one end, a spring connecting said arm with said frame, an electro-magnet mounted in said frame and positioned to engage the other end of said arm whereby said sliding
25 member may be locked against movement in one direction only.

Signed at New York city, in the county of New York, and State of New York, this 29th day of December, 1910.

GROVER C. MAXWELL.

Witnesses:

BENJ. W. LEWIS,
B. W. COULDOCK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
