No. 829,832.

PATENTED AUG. 28, 1906.

R. A. BECKER.

RAILWAY SWITCH LOCK.

APPLICATION FILED JAN. 16, 1906.

Fig. 1.

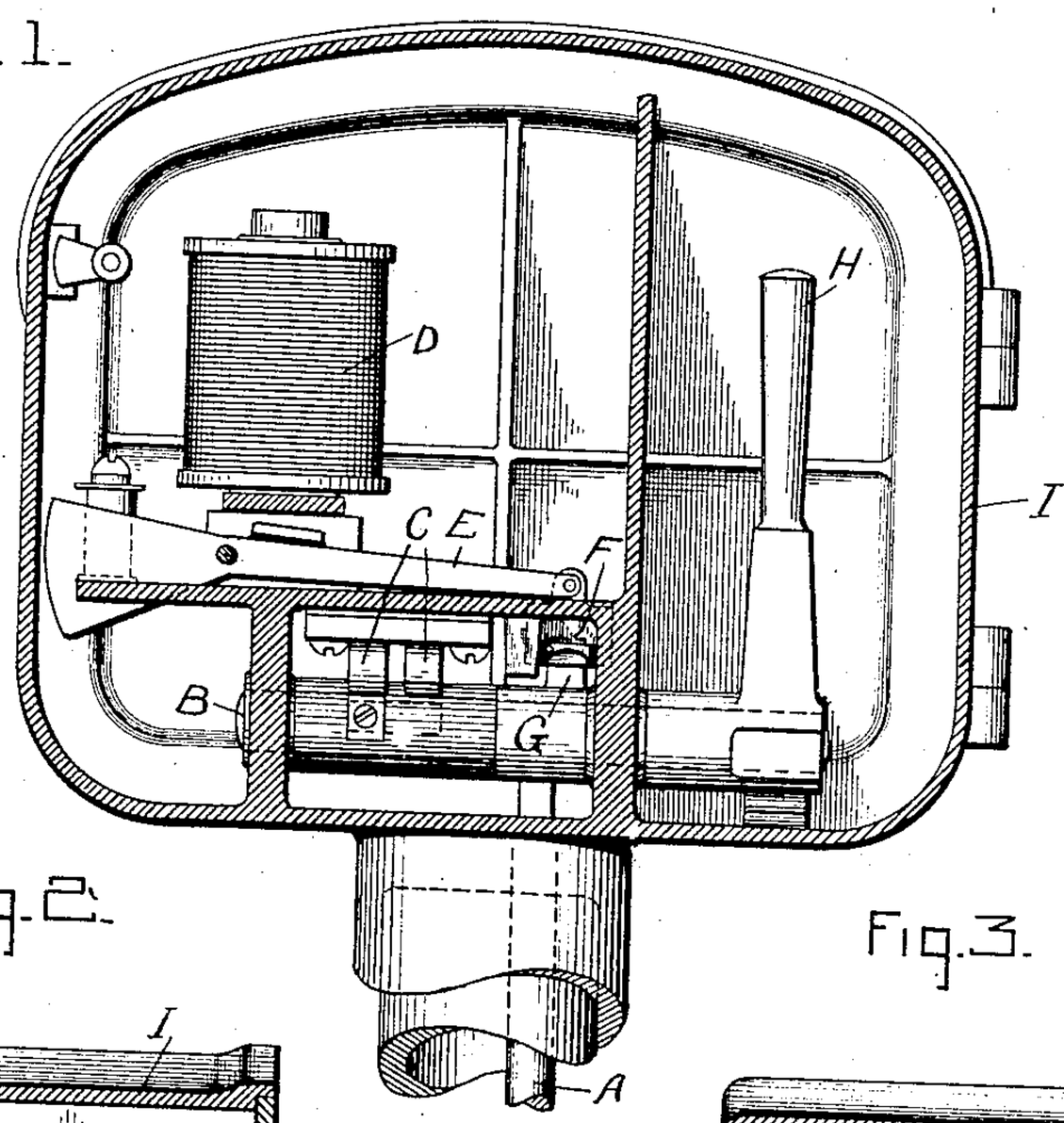


Fig. 2.

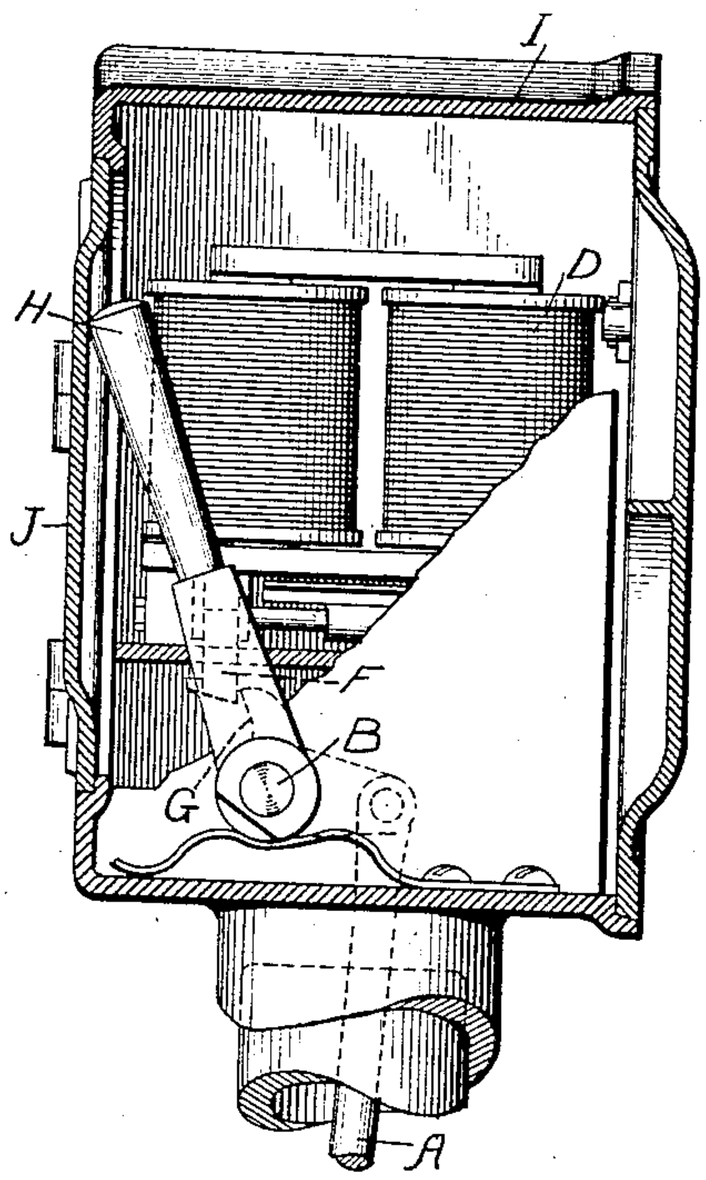
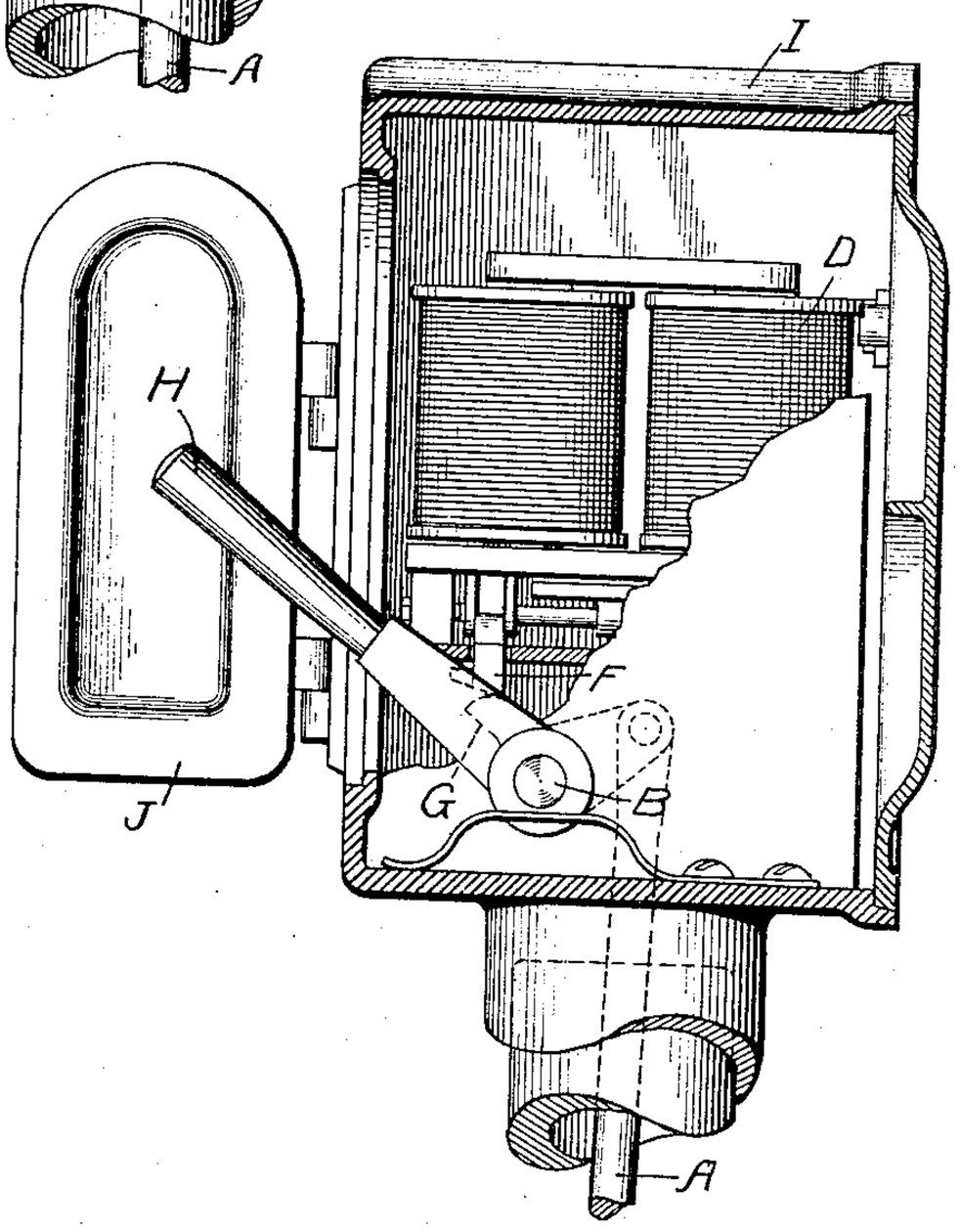


Fig. 3.



WITNESSES.

W. Ray Taylor.

Helen Alford

INVENTOR.

ROBERT A BECKER.

by Albritton & Davis

Atty.

UNITED STATES PATENT OFFICE.

ROBERT A. BECKER, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

RAILWAY-SWITCH LOCK.

No. 829,832. Specification of Letters Patent. Patented Aug. 28, 1906.

Application filed January 16, 1906. Serial No. 296,345.

To all whom it may concern:

Be it known that I, ROBERT A. BECKER, a citizen of the United States, residing at Schenectady, in the county of Schenectady, State of New York, have invented certain new and useful Improvements in Railway-Switch Locks, of which the following is a specification.

My invention relates to railway-switch locks of the type provided with means controllable from a distance for holding the switch-lock in locking position, so that it cannot be moved manually without the consent of the distant operator.

The object of my invention is to insure the return of the switch-lock after manual operation to the proper position for again placing it under the distant control. Obviously if the locking member is not thus returned it may be moved manually at any time without the consent of the distant operator, and accidents may follow.

Switch-locking devices of the type to which my invention relates are ordinarily inclosed for protection from the weather in a casing mounted on a suitable support and provided with a door for giving access to the handle for moving the locking member manually from locking position when released by the distant control.

My invention consists in so arranging the locking mechanism relatively to the door that the door cannot be closed unless the locking member is in locking position. Since the rules of the road require that the door must always be closed before the brakeman or other operator leaves the switch, it is evident that with this arrangement the locking member must be placed under the distant control at the same time.

In carrying out my invention I prefer to utilize the handle for shifting the locking member as the means for preventing the closing of the door unless the locking member is in locking position. This end is obtained in a simple manner by so arranging the handle that in locking position it is in engagement with the door when the door is closed and moved outwardly through the door to move the locking member from locking position. With this arrangement the door obviously cannot be closed until the handle is restored to locking position, and if the operator does not push the handle clear back to locking position the door in closing will engage the handle and complete its movement to locking position.

My invention will best be understood by reference to the accompanying drawings, in which—

Figure 1 shows a front elevation of a switch-lock arranged in accordance with my invention with the casing in cross-section. Fig. 2 shows a side elevation of the same with the parts in locking position, and Fig. 3 shows a similar view with the parts moved out of locking position.

In the drawings, A represents a rod which by its movement locks and unlocks a railway-track switch. The switch itself and the connections between the rod A and the track-switch are not shown, since many such arrangements are well known in the art and form no part of my present invention. The rod A is controlled by a shaft B, to which it is connected through a crank. (Shown in dotted lines in Figs. 2 and 3.) The shaft B carries insulated movable contacts adapted to engage the stationary contacts C (shown in Fig. 1) to control a signal or indicator in the usual manner.

D represents an electromagnet which is controlled from a distant point, the pivoted armature E of which carries at its end a latch F, which is adapted to engage a dog G on the shaft B, so as to hold the shaft in locking position. The arrangement of latch F and dog G is clearly shown in Fig. 2 in dotted lines. As long as the magnet is deënergized the track-switch cannot be unlocked; but if the magnet D is energized it will lift the latch F out of engagement with the dog G and allow the handle H to be moved to shift the mechanism from locking position, as shown in Fig. 3. The mechanism is inclosed in the usual casing I, mounted on a suitable support provided with a door J for giving access to the handle for moving the device from locking position when released by the distant control. It is evident that if after the handle H is moved to the position shown in Fig. 3 it is not returned all the way to locking position the latch F cannot engage the dog G, so that the locking device is no longer under the control of the operator at the distant point. In order to insure the full return movement of the handle H, I so arrange the handle relatively to the door J that when the handle is

in locking position and the door closed, as shown in Fig. 2, the handle and door are in engagement. Consequently the door cannot be closed until the handle is in locking position, or, in other words, if the handle is not fully returned to locking position the door in closing will complete its movement, with the result that when the door of the casing is closed the switch-lock is at all times under the distant control.

My invention is not limited to any particular construction or arrangement of switch-lock, and consequently I do not desire to limit myself to the particular construction and arrangement of parts here shown, but aim in the appended claims to cover all modifications which are within the scope of my invention.

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

1. In combination, a locking member, a latch controllable from a distance for holding said member in locking position, a casing, a door in said casing, and means for preventing the closing of said door except when said member is in locking position.

2. In combination, a locking member, a latch controllable from a distance for holding said member in locking position, a handle for moving said member from locking position when released by the latch, a casing, and a door in said casing for giving access to said handle, said door being arranged by its closing to return said member to locking position.

3. In combination, a locking member, a latch controllable from a distance for holding said member in locking position, a casing, a door in said casing, and a handle within said casing connected to said locking member, said handle being arranged to engage said door when the handle is in locking position and the door closed and to move outwardly through the door in shifting said member from locking position.

4. In combination, a locking member, a latch controllable from a distance for holding said member in locking position, a casing, a door in said casing, and a handle within said casing connected to said locking member, said handle being arranged to prevent the closing of said door except when the handle is in locking position.

In witness whereof I have hereunto set my hand this 15th day of January, 1906.

ROBERT A. BECKER.

Witnesses:
ALEX. F. MACDONALD,
HELEN ORFORD.