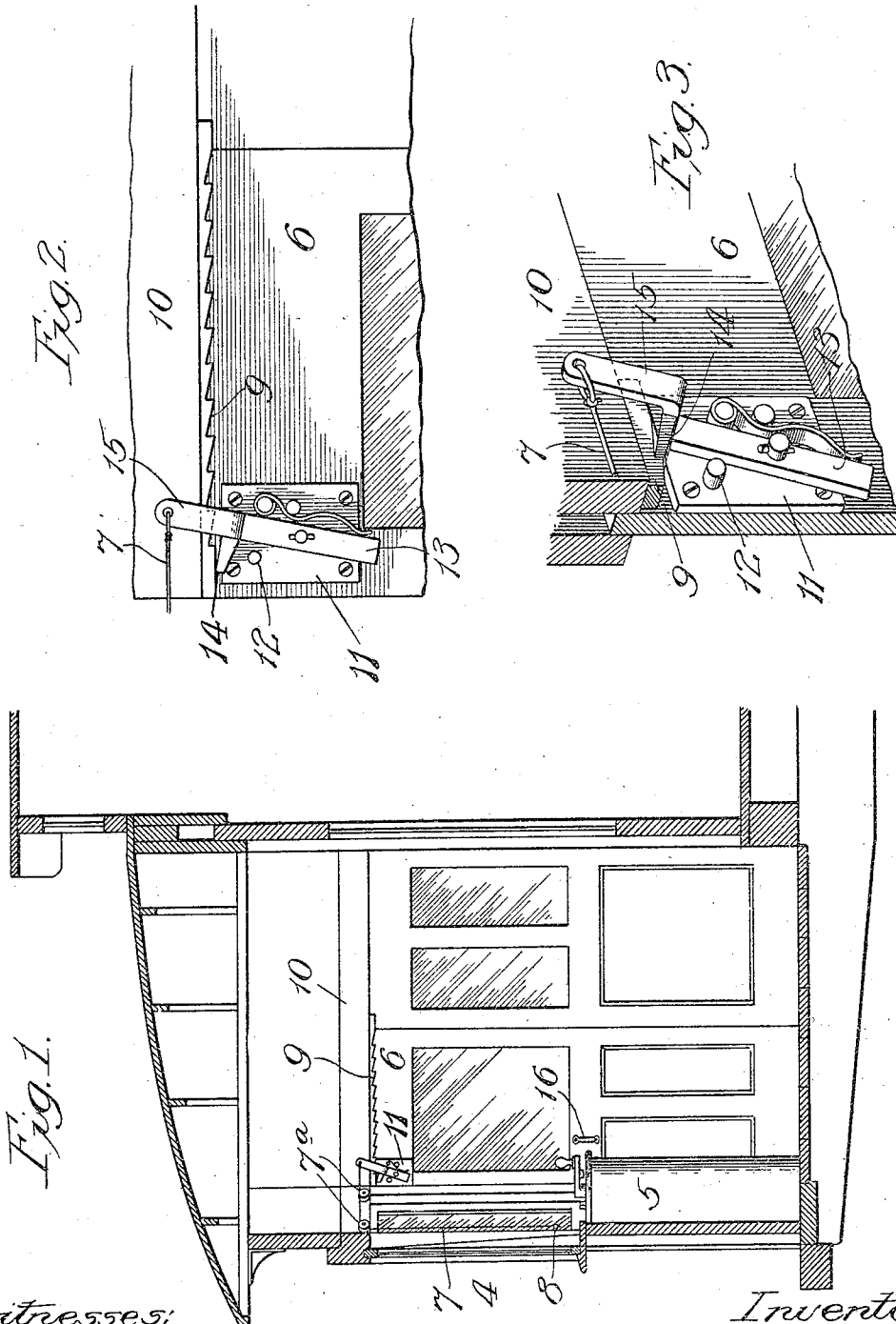


J. H. HERRICK.
SLIDING DOOR LOCK.
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950,132.

Patented Feb. 22, 1910.



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UNITED STATES PATENT OFFICE.

JAY H. HERRICK, OF CHICAGO, ILLINOIS.

SLIDING-DOOR LOCK.

950,132.

Specification of Letters Patent. Patented Feb. 22, 1910.

Application filed November 24, 1909. Serial No. 529,715.

To all whom it may concern:

Be it known that I, JAY H. HERRICK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sliding-Door Locks, of which the following is a specification.

My invention relates to an improvement in means for automatically locking a sliding-door against self-closure.

I have especially devised my improvement for use on the sliding doors of street-cars of the variety known as "pay-as-you-enter" cars, and therefore illustrate it in that particular connection in the accompanying drawings and confine thereto the description hereinafter contained.

The sliding door at the front end of an electric car of the variety referred to, and which is the intended exit and is under the control of the motorman, has connected with it, as the more usual medium for fastening it in closed condition and for pulling it into that condition, a wire rope having one end attached to the upper part of the door near its forward corner and passing thence, over guide-pulleys, with its opposite end into convenient reach of the motorman, where it is releasably fastened. To permit a passenger to leave the car, the motorman must first unfasten the rope, whereupon the passenger pulls the door open and passes out. The motorman is expected to thereupon close the door by pulling upon the rope for the purpose, but, as experience has shown, this is very often done by a passenger on the platform and is liable to be premature, but whenever it is thus done, it loops the wire rope and kinks it with the result that repeated kinking soon breaks the strands and renders the rope useless, requiring it to be replaced by another and incurring considerable expense; and when the door is closed thus prematurely there is liability of its catching passengers in the act of alighting and more particularly the clothing of women-passengers, with the result of tripping and injuring them. Moreover, the door tends to close automatically when the car is on a down-grade, and also by sudden starting of the car, with the objectionable consequences hereinbefore mentioned.

The object of my invention is to provide means for automatically locking the door at every point to which it is opened, to prevent closure thereof except by pulling on the

rope, thereby tending to confine that duty to the motorman, and to cause the door to be released from the locking means by the act of thus closing it.

In the drawing, Figure 1 shows, in sectional elevation, the front end of an electric pay-as-you-enter street-car equipped with my improvement; Fig. 2 is an enlarged broken view of the same in elevation, showing the door in closed condition, and Fig. 3 is a broken and sectional perspective view of the same, showing the condition of the locking means when the door is open.

The front platform of a car 4, of the variety referred to and containing the controller 5 for manipulation by the motorman, is equipped with the usual sliding door 6, having connected with it a wire rope 7, passing from the door over guide-pulleys 7^a to hang at its free end near the controller, where it is releasably fastened, as indicated at 8, any suitable means for the purpose being employed. A ratchet 9, in the preferred form of the variety thereof known as a ratchet-rack, is secured to the inner lower face of the upper member 10 of the door-frame, to extend along the same. On the door, near its upper and forward corner, is secured a spring-pawl device consisting of a metal plate 11 provided with a stop 12 and carrying a spring-pressed pawl 13, for which the stop forms a bearing, and from the tooth 14 on the upper end of which extends upwardly an angular arm 15 having fastened to its upper end the rope, thus to connect the rope with the door. The tooth is in position to be maintained by the spring-pressure in permanent engagement with the bar 9; but it slips freely along the latter in opening the door, though the pawl-tooth will engage a tooth of the bar at any position of the door to lock it against closure without disengaging the pawl, which may only be done by pulling on the rope, and, therefore, presumably, by the motorman. Thus looping and resultant kinking of the rope is avoided, and the accidental happenings hereinbefore mentioned are prevented.

To permit the door to be opened, the rope must first be released by the motorman at its fastenings 8, when a passenger on the platform grasps a handle 16 on the door and pulls it open, and it necessarily remains open until the pawl is disengaged from the ratchet. Before starting the car, the motorman pulls the rope, thereby, as the first

effect, turning the pawl out of engagement with the ratchet to unlock the door and, by continued pulling, as the next effect, drawing the door into closed position, because of
5 the connection of the rope with the door through the medium of the pawl.

What I claim as new and desire to secure by Letters Patent is—

10 In combination with a sliding door, a ratchet on the door-frame extending along the upper end of the door, a pawl-device comprising a plate secured to the door, a

spring-pressed pawl provided on the plate and engaging the ratchet, and an angular arm projecting from the upper end of the
15 pawl, and a rope secured to the arm and passing thence into accessible position for releasably fastening it and pulling it to first disengage the pawl from the ratchet and then close the door.

JAY H. HERRICK.

In presence of—

J. G. ANDERSON,
R. A. SCHAEFER.