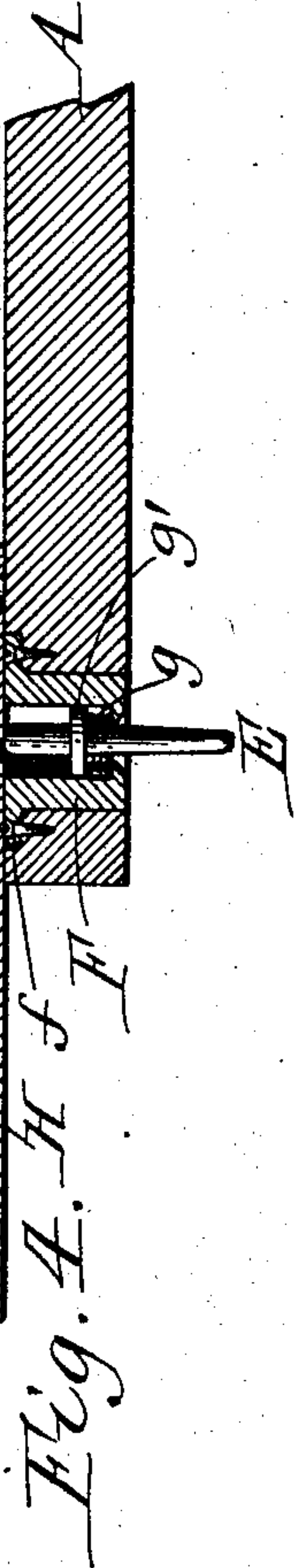
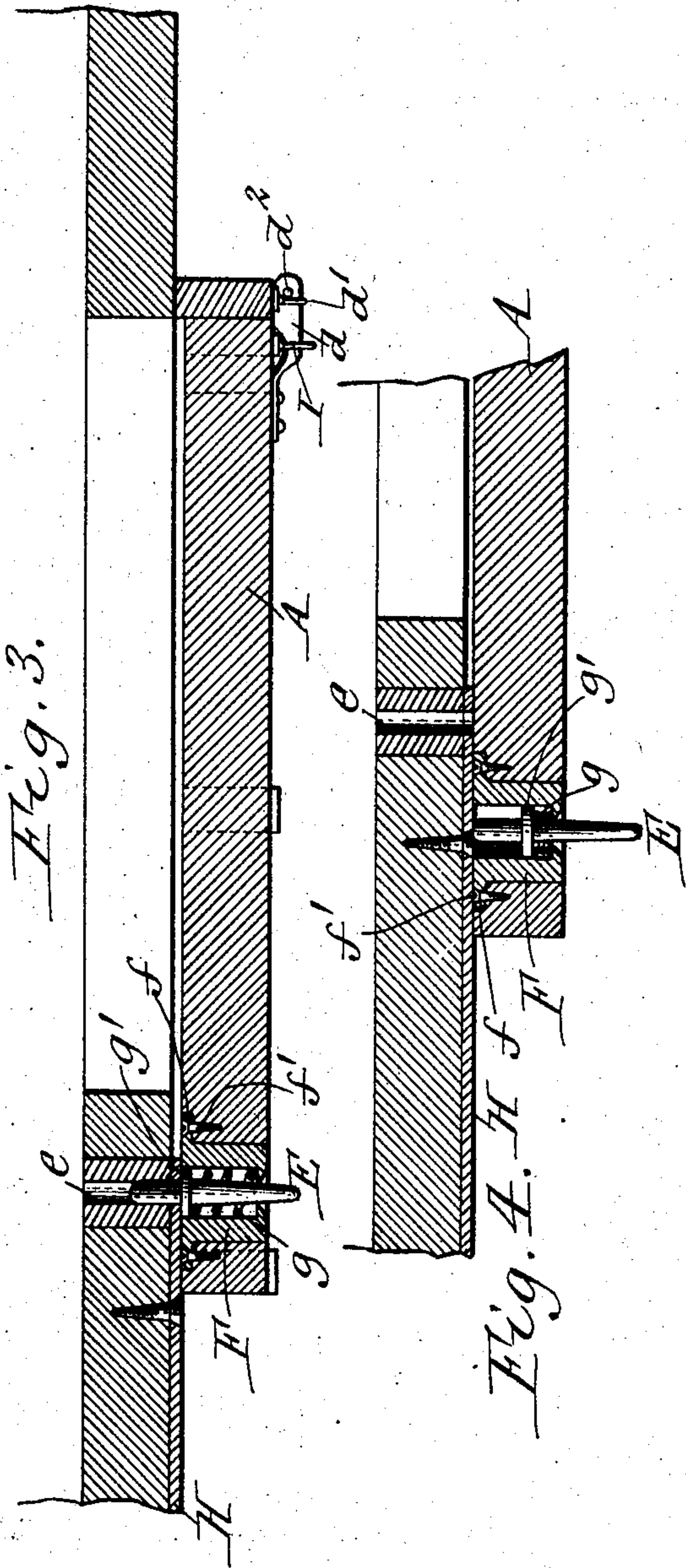
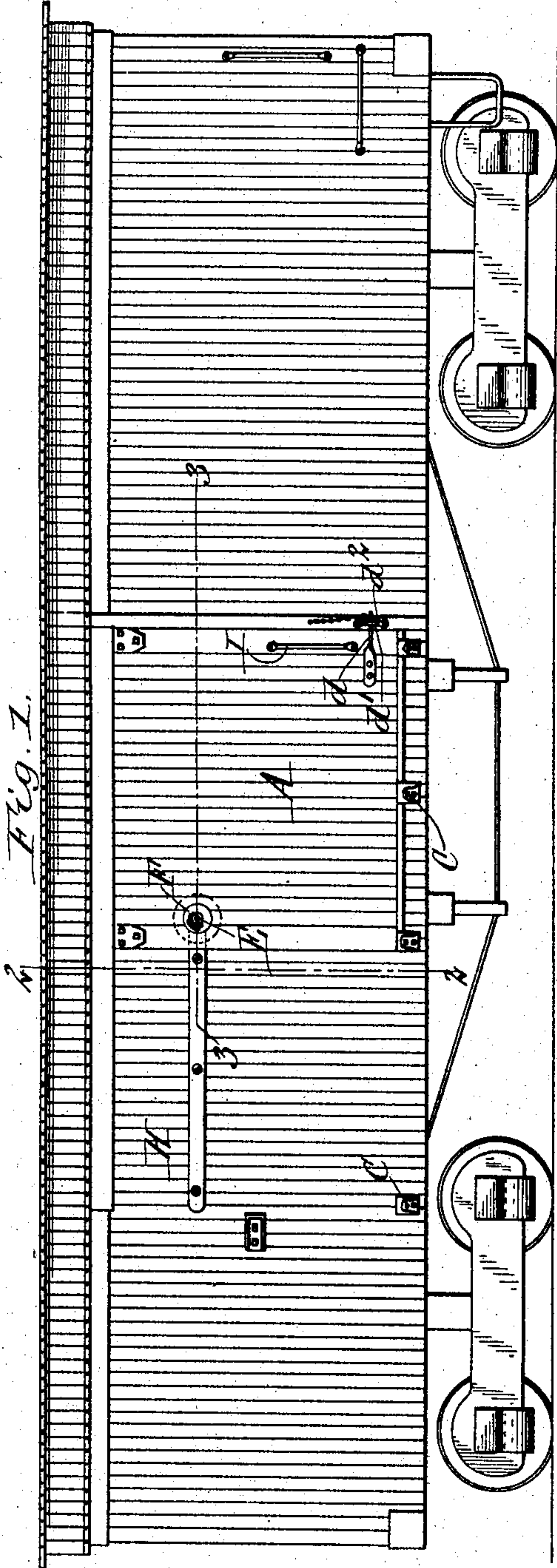


No. 772,464.

PATENTED OCT. 18, 1904.

J. F. LANE.
CAR DOOR RETAINER.
APPLICATION FILED JUNE 22, 1903.

NO MODEL.



Witnesses:
Louis W. Gratz.
Robert Wittknecht.

John F. Lane,
Inventor.
By Geyer & Popp
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN F. LANE, OF BUFFALO, NEW YORK, ASSIGNOR OF TWO-THIRDS TO WILLIAM M. MARSHALL, OF ANGOLA, NEW YORK, AND RICHARD E. GAVIN, OF BUFFALO, NEW YORK.

CAR-DOOR RETAINER.

SPECIFICATION forming part of Letters Patent No. 772,464, dated October 18, 1904.

Application filed June 22, 1903. Serial No. 162,509. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. LANE, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Car-Door Retainers, of which the following is a specification.

This invention relates more particularly to a locking or retaining device for the sliding doors of freight-cars.

The principal object of my invention is to so construct and arrange the retaining device as to render it practically impossible for a car-burglar to reach the device for releasing and opening the door without danger of detection.

The invention has the further object to provide a simple door-retainer which takes the place of the usual cleat or batten nailed to the side of the car at the rear edge of the door.

In the accompanying drawings, Figure 1 is a side elevation of a freight-car embodying my invention. Fig. 2 is a fragmentary transverse vertical section in line 2 2, Fig. 1, on an enlarged scale. Fig. 3 is a fragmentary horizontal section in line 3 3, Fig. 1, on an enlarged scale, showing the door held in its closed position. Fig. 4 is a section similar to Fig. 3, showing the retaining-bolt withdrawn for releasing the door.

Similar letters of reference indicate corresponding parts throughout the several views.

A indicates the sliding car-door, which may be supported and guided by any suitable or well-known means. In the construction shown in the drawings the door is provided at its upper edge with the customary door-hangers B, and is held against the side of the car at its lower edge by the usual guides C.

d is the door-hasps, which passes through the staple *d'* on the door-post, and *d''* the usual pin of the hasp to which the customary seal is attached after loading the car and closing the door.

E indicates the retainer for keeping the car-door closed. This retainer preferably consists of a spring-bolt passing transversely

through the car-door and adapted to enter an opening or socket *e*, seated in the side of the car, as shown in Fig. 3. In the preferred construction shown in the drawings this bolt is guided in a cylindrical casing F, arranged in an opening of the car-door and provided at its inner end with a countersunk flange *f*, through which the fastening-screws *f'* pass.

g is the spring of the bolt, which bears at its inner end against a collar *g'* of the bolt and at its opposite end against the closed outer end of the casing F. The bolt projects through the front end of the casing, so as to be accessible from the outer side of the door, and the same is smooth and tapered toward its outer end, as shown, in order to render it difficult to grasp and withdraw the bolt except by standing before it and to preclude blocking or wedging it in its retracted position.

The side of the car is preferably provided in line with the retaining-bolt E with a longitudinal rail H, upon which the rounded inner end of the bolt runs in opening and closing the car-door. Freight-cars usually have such a rail arranged midway of the top and bottom of the door, and this same rail may be utilized as the guide-rail of the retaining-bolt by elevating the rail to the level thereof. This retaining-bolt is arranged in or near the upper rear corner of the door, or, in other words, remote from the front edge of the door, where its handle I is usually located, and at such a height that a person standing on the ground cannot reach the bolt. At the same time the bolt is located so far below the car-roof that a person lying upon the latter cannot reach and manipulate the bolt. For this purpose the bolt is placed near the rear edge of the car-door and about two feet and a half below its top. By this arrangement of the bolt even if a car-burglar or other unauthorized person should use a ladder for reaching the same it is impossible for him to hold the spring-bolt in its withdrawn position and at the same time reach the handle of the door, because the distance between the bolt and the handle is greater than the stretch of

the arms. This is especially the case if a person should attempt to release and open the door from the roof of the car. To open the door, it is necessary for one person to with-
5 draw and hold out the bolt and another to seize the handle and shift the door. Two unauthorized persons would naturally be deterred from attempting to enter a car in this manner, because of the great risk of detection.

10 When a car equipped with such a door-retainer is brought opposite the platform of a freight-house, the bolt can be easily reached for releasing the door, and the height of the bolt is also such that it can be reached with-
15 out difficulty from the platform of a wagon or other vehicle standing beside the car.

The spring-bolt constituting the door-retainer interlocks automatically with the socket of the car-body when the door is fully
20 closed, and it is therefore impossible to close and seal the door without at the same time securing it in that position. This is an important feature of the device, inasmuch as the duty of closing and securing the doors after
25 loading cars usually falls to a cheap and more or less careless class of labor. The device also dispenses with the battens or cleats which are usually nailed to the side of the car for secur-

ing the door, thus preventing the damage to cars resulting from the use of such cleats. 30

I claim as my invention—

The combination with a railway-car having a sliding door and provided in its outer side in rear of the door with a socket, of a sliding bolt passing through the door and adapted to
35 enter said socket, said bolt being located near the rear edge of the door and between its top and its central portion, so as to be inaccessible except by one on an elevation, such as a station-platform, and to substantially preclude
40 the use thereof as a handle to slide the door, the handle of the bolt being smooth and tapered to preclude grasping or engaging the same to withdraw the bolt other than by a
45 direct grasp and pull in line therewith, and so fitted as to prevent blocking or wedging it in its retracted position, and a spring applied to said bolt and tending to move the same into said socket, substantially as set forth.

Witness my hand this 19th day of June, 50
1903.

JOHN F. LANE.

Witnesses:

RICHARD E. GAVIN,
THEO. L. POPP.