

C. H. LEWIS.  
CAR DOOR LOCK.  
APPLICATION FILED OCT. 29, 1908.

922,168.

Patented May 18, 1909.

Fig. 1

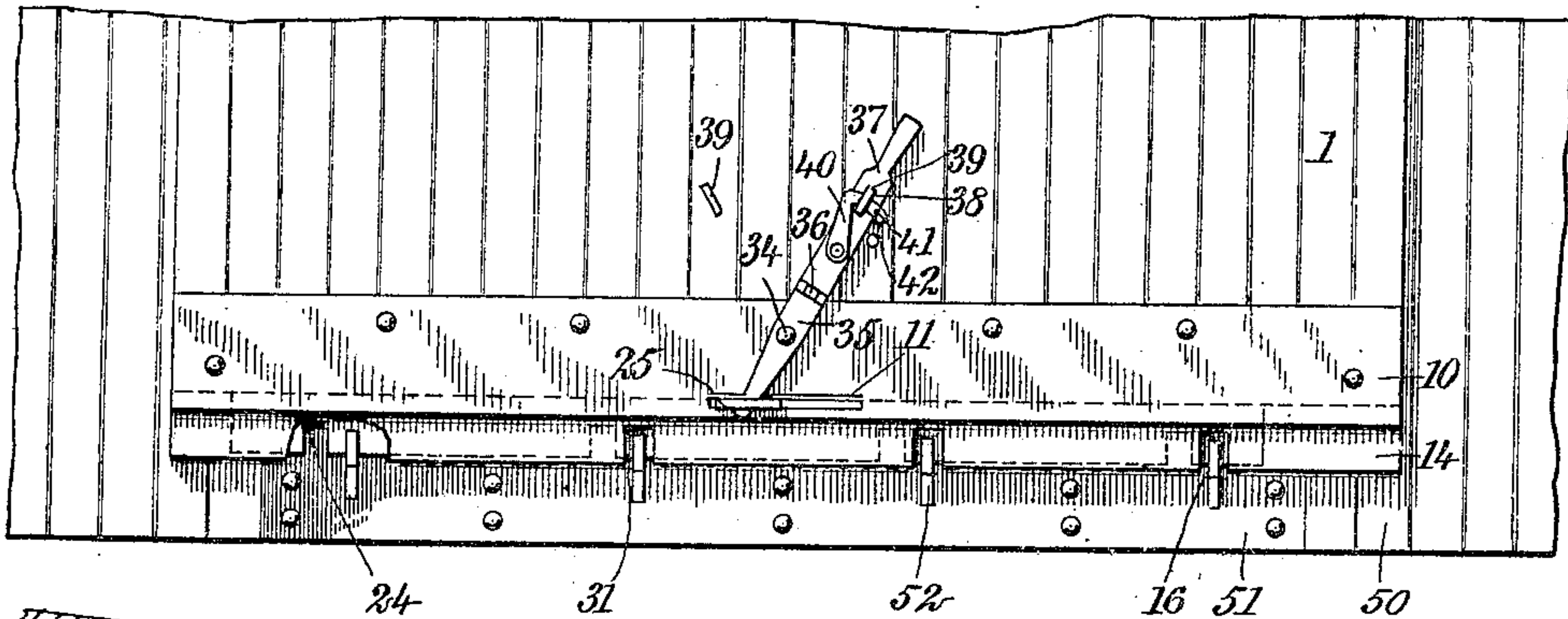


Fig. 2

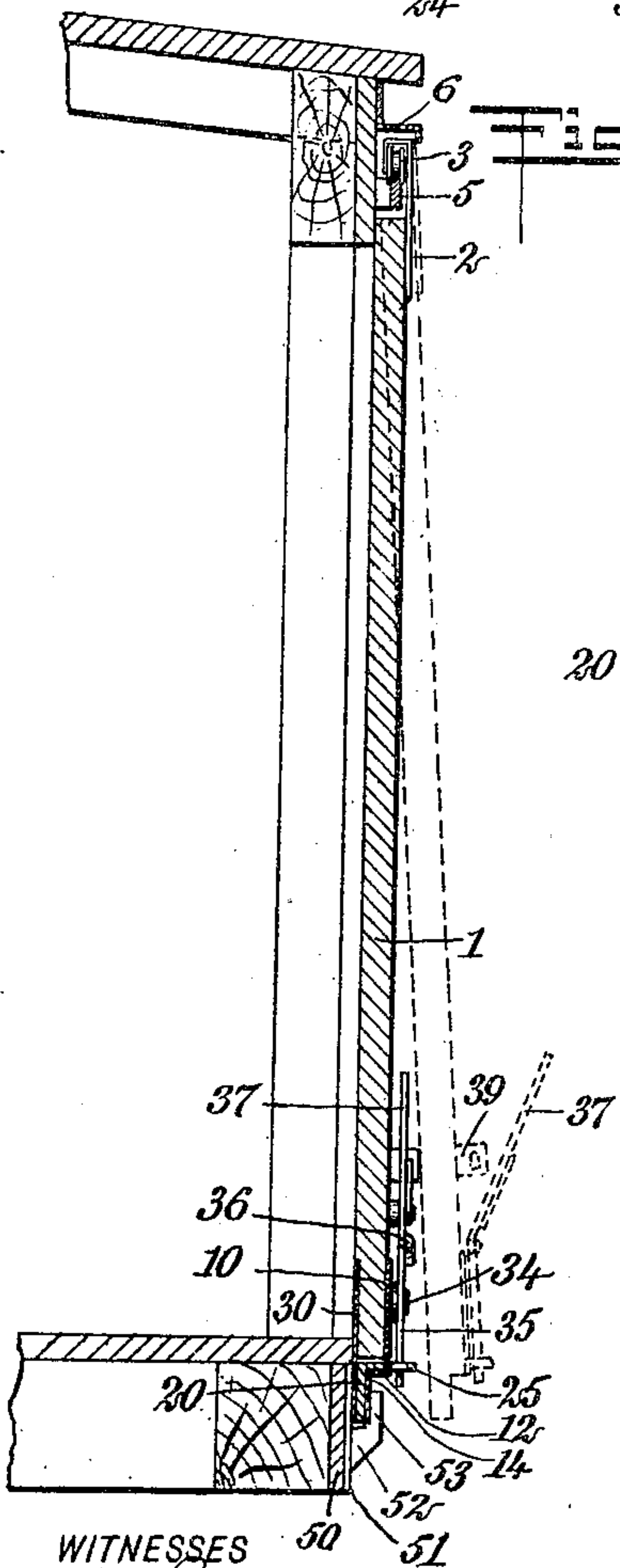


Fig. 3

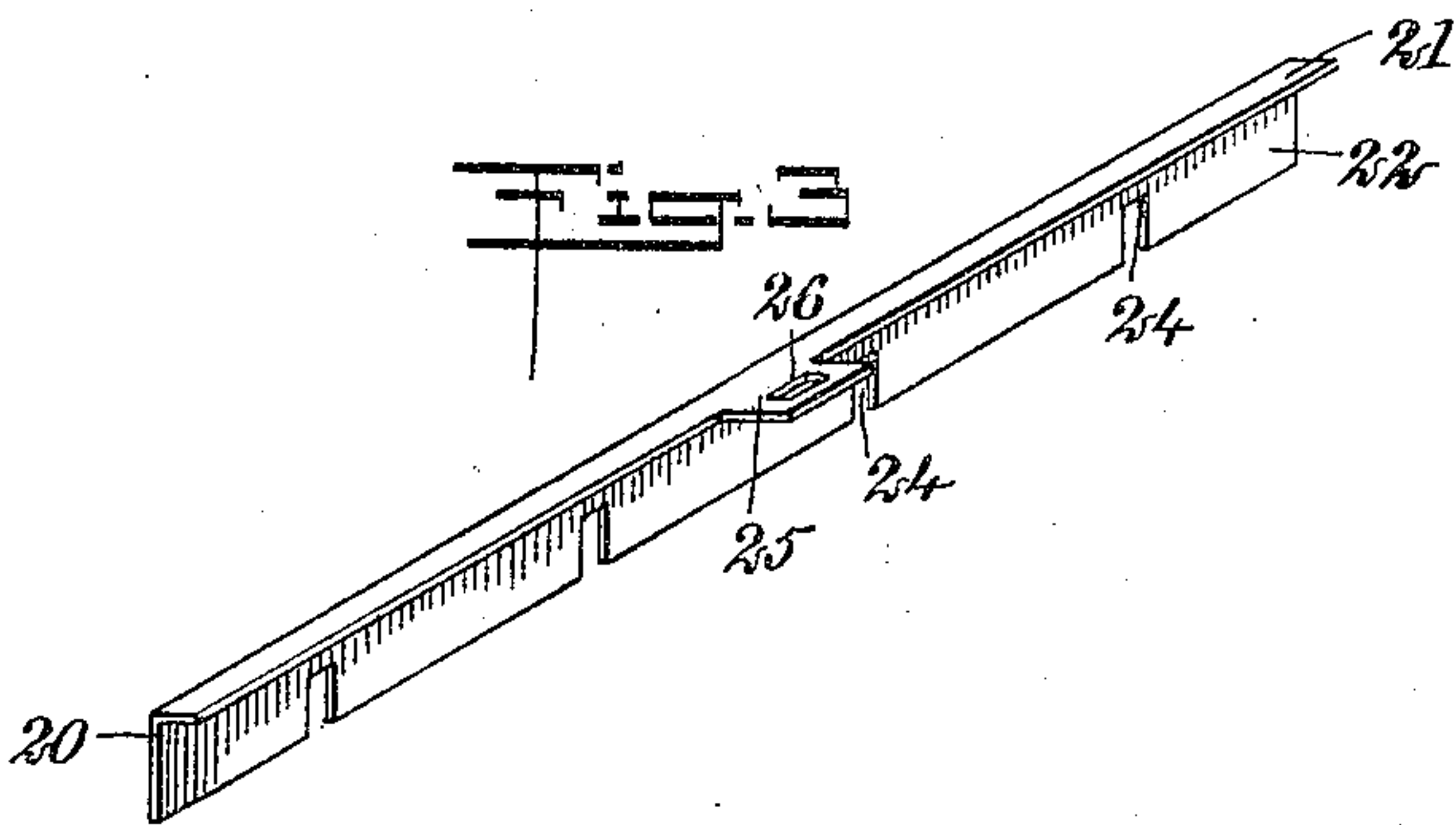
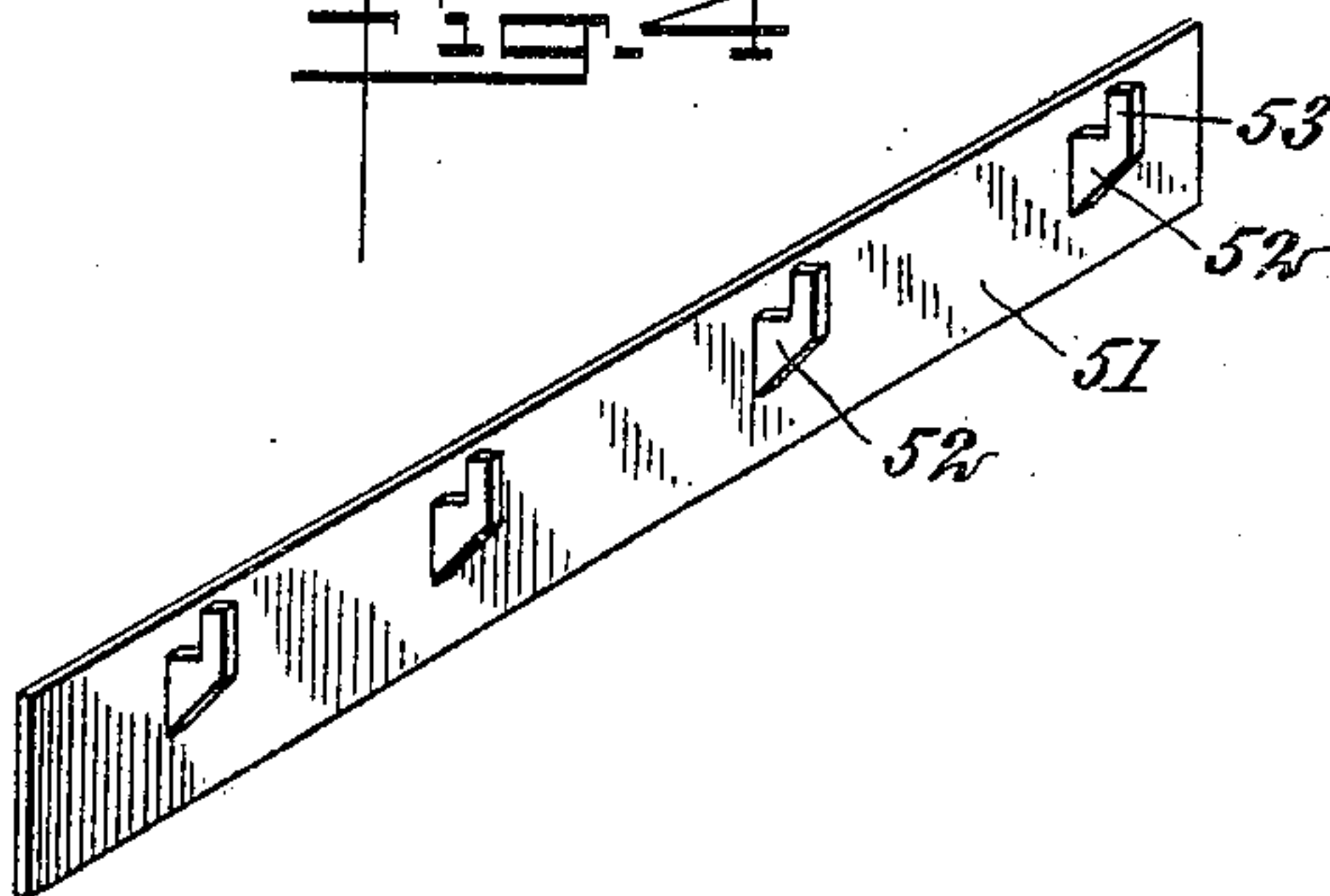


Fig. 4



WITNESSES

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# UNITED STATES PATENT OFFICE.

CHARLES HENRY LEWIS, OF CHILLICOTHE, OHIO.

## CAR-DOOR LOCK.

No. 922,168.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed October 29, 1908. Serial No. 460,021.

*To all whom it may concern:*

Be it known that I, CHARLES HENRY LEWIS, a citizen of the United States, and a resident of Chillicothe, in the county of Ross and State of Ohio, have invented a new and Improved Car-Door Lock, of which the following is a full, clear, and exact description.

This invention relates to a car door locking device, by means of which a car door may be securely fastened when either open or closed, or at any intermediate position.

The invention is adapted for employment upon the doors of box cars which are employed in carrying perishable goods, it being desirable in such cases to permit the door to stand open slightly for the purpose of ventilation.

The object of the invention is to provide a simple and durable device, overcoming the objections now common in locking means applied to such doors.

The invention consists of novel features and parts and combinations of the same, as will be described more fully hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation showing a car door with my locking device applied thereto; Fig. 2 is a vertical section through a portion of a car, showing the door in its closed position and also in dotted lines the means by which it may be moved back and forth; Fig. 3 is a detail perspective view of the sliding plate of my locking device, and Fig. 4 is a detail perspective view of the stationary plate for maintaining the door in position.

In said drawings, a car door 1 is provided at its upper end with brackets 2, which support rollers 3 adapted to bear upon the upper side of a track 5. Above the track is a guard 6, which is spaced a sufficient distance from the track and rollers to enable the door to be swung outwardly into the dotted line position shown in Fig. 2.

At the lower outer face of the door 1 is secured an angular plate 10. Said plate is provided with a slot 11, about midway of its length and in line with the upper edge of a horizontal portion 12. The plate 10 is bent at right angles to the horizontal portion 12, forming a strip 14, provided with

notches 16. Mounted to slide upon the horizontal portion 12 is an angular plate 20, the horizontal portion 21 of which is adapted to bear upon the upper side of the said horizontal portion 12. The plate 20 has a depending strip 22, provided with notches 24 spaced similarly to the notches 16 in the strip 14. The horizontal portion 21 of the plate 20 is provided with a lateral projection 25 having a slot 26 therein. Said projection 25 normally projects through the slot 11 a sufficient distance to allow the slot 26 to clear the upper vertical portion of the plate 10.

Attached to the inner face of the car-door 1, near its lower edge, is a flat plate 30, having notches 31 similarly spaced to the notches 16 in the plate 10 and registering therewith. The plate 30 and the strip 14 act as guides for the sliding plate 20. Pivoted to the car-door 1 by means of a bolt 34 is a lever 35, having a hinge joint 36 between the bolt 34 and the handle 37. The lower end of the lever 35 extends through the slot 26 in the projection 25, and it will be seen that the plate 20 may be slid back and forth by means of the lever 35. The upper portion of the lever 35 is provided with a slot 38, adapted to receive a staple or other fastening device 39 secured to the car-door 1. Pivoted to the lever 35 is a hook 40, the free end of which is provided with a hole 41 for receiving the wire of the ordinary car-door seal 42.

Bolted to the outside of the body 50 of the car is a plate 51, having projections 52, each provided with upwardly-extending portions or lugs 53. The projections 52 are spaced similarly to the notches in the plates 10, 20 and 30. The distance between the inner face of the lugs 53 and the adjacent face of the plate 51 is such that the lugs rest within the notches 16 formed in the lower extension 14 of the plate 10, as shown in Fig. 2. By this construction the car door is prevented from being slid longitudinally along the face of the car.

The operation of the device is as follows: The hook 40 is withdrawn from the staple 39, whereupon the handle 37 may be tilted away from the door, so that the lever 35 may be swung about the pivot 34. As the lever is swung, its lower end moves the plate 20 until the notches 24 therein register with the lugs 53, whereupon it will be seen that all of the notches 16, 24 and 31 are in regis-



try, whereupon the door may be tilted outwardly into the position shown in Fig. 2.

In order to lock the door it is merely necessary, having brought the notches into registry with the lugs 53, to press the door against the face of the car body and move the lever 35 so that the staple 39 may be entered through the slot 38 in its handle, whereupon the hook 40 may be passed through the staple 39 and sealed against removal, by the seal 42.

As shown in Fig. 1, the door is in its closed position. If it is desired to leave the door open a short distance, it may be slid back to the extent of the distance between two or more lugs 53. It is then merely necessary to bring the notches into registry as above described and lock the lever 35 in position. The lugs 53 will engage the sides of the notches 16 if it be attempted to move the door longitudinally of the car. Its lateral movement is prevented by the engagement of the strip 22 with the lugs 53, said strip being locked against longitudinal movement by the locking of the lever 35.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. The combination with a car body, of a door mounted to slide and swing toward and from the door opening, and a locking device for locking the door against both sliding and swinging movement, whereby the door can be locked closed, opened or partially open.

2. The combination with a car body, of a door mounted to slide and swing toward and from the door opening, members carried by the car body and door for engagement with each other when the door is closed or opened or partially open to hold the door against sliding movement, and means for locking the members in engagement in any one of the said positions to hold the door against swinging movement.

3. The combination with a car body provided with a plurality of lugs adjacent to its door opening, of a door mounted to slide and swing toward and from the door opening and provided with a plurality of openings at its lower edge to receive the said lugs, whereby the door is held against sliding movement, and means for locking the door against swinging movement.

4. The combination with a car body provided with a plurality of lugs adjacent to its door opening, of a door mounted to slide and swing toward and from the door opening and provided with a plurality of openings at its lower edge to receive the said lugs, and a sliding member carried by the door for engaging the said lugs to lock the door against swinging movement.

5. In combination, a car body, a door provided with a series of notches at its lower edge, a series of lugs on the car body and

adapted to enter said notches, a slidably mounted plate provided with notches adapted to register with the notches in the lower edge of said door and with said lugs, means for sliding said plate out of registry, and means for locking said plate in its adjusted position.

6. In combination, a car door having a plate at its lower edge provided with notches, a car body having a series of lugs adapted to enter said notches, a plate slidably mounted at the lower edge of said car door and having a plurality of notches adapted to register with the notches in said first-mentioned plate, and means for sliding said notched plate into and out of registry.

7. In combination, a car door having a plate at its lower edge provided with notches, a car body having a series of lugs adapted to enter said notches, a plate slidably mounted at the lower edge of said car door and having a plurality of notches adapted to register with the notches in said first-mentioned plate, and a lever operatively connected to slide said notched plate into and out of registry.

8. In combination, a car door having a plate at its lower edge provided with notches, a car body having a series of lugs adapted to enter said notches, a plate slidably mounted at the lower edge of said car door and having a plurality of notches adapted to register with the notches in said first-mentioned plate, a lever operatively connected to slide said notched plate into and out of registry, and means for locking said lever against movement.

9. In combination, a car door having a plate at its lower edge provided with a series of notches, a car body having a plurality of lugs adapted to enter said notches, a slidably mounted plate provided with notches adapted to register with said lugs and having a slotted lateral projection, a lever pivoted to the car door and having one end in the slot in said projection, and means for locking said lever in adjusted position.

10. The combination with a car door mounted to slide and to swing toward and from a door opening and presenting spaced openings, retaining devices secured adjacent to the door opening and spaced corresponding to said openings presented by the door, and a member also provided with corresponding spaced openings and movable to bring said openings into or out of register with adjacent retaining devices.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES HENRY LEWIS.

Witnesses:

WILLIAM W. JOHNSON,  
JOHN F. BROWN.