

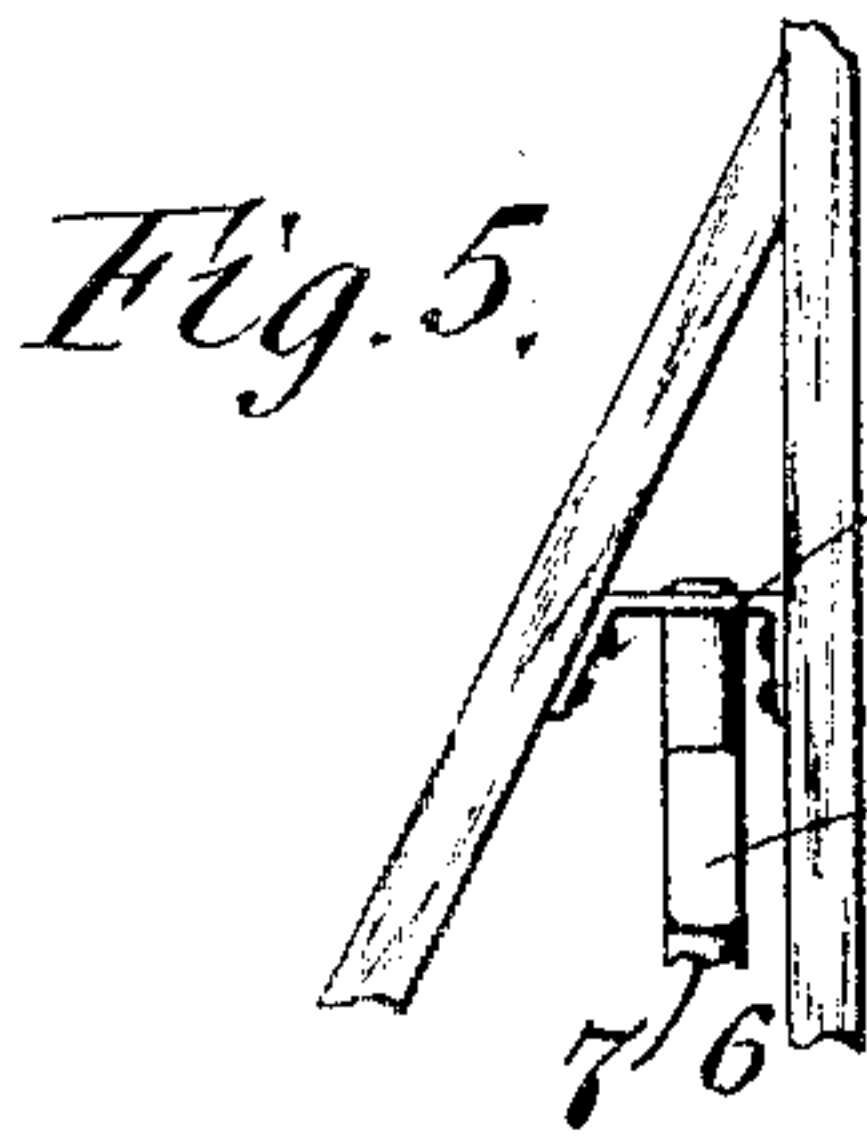
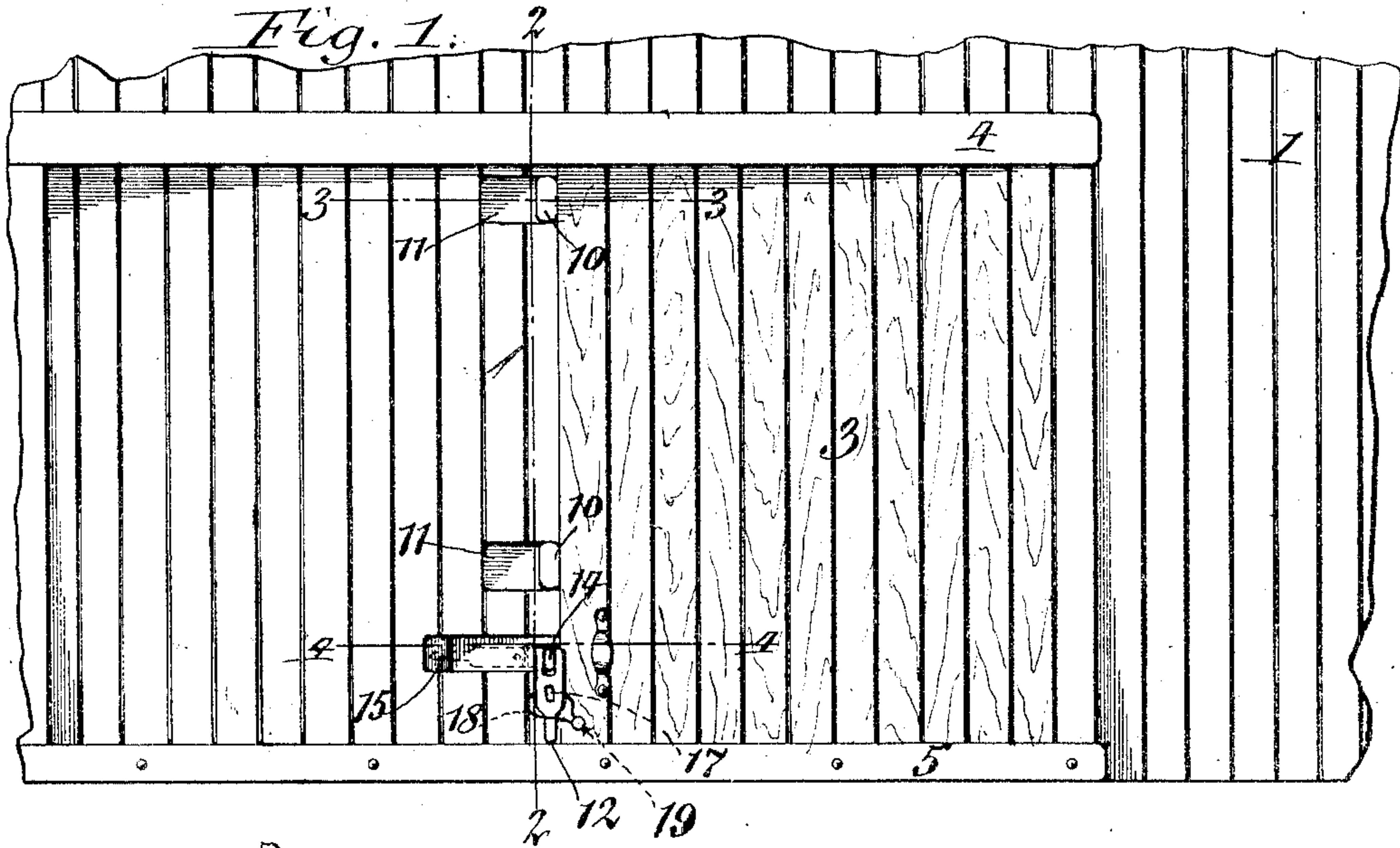
T. H. WATTS.

CAR DOOR LOCK.

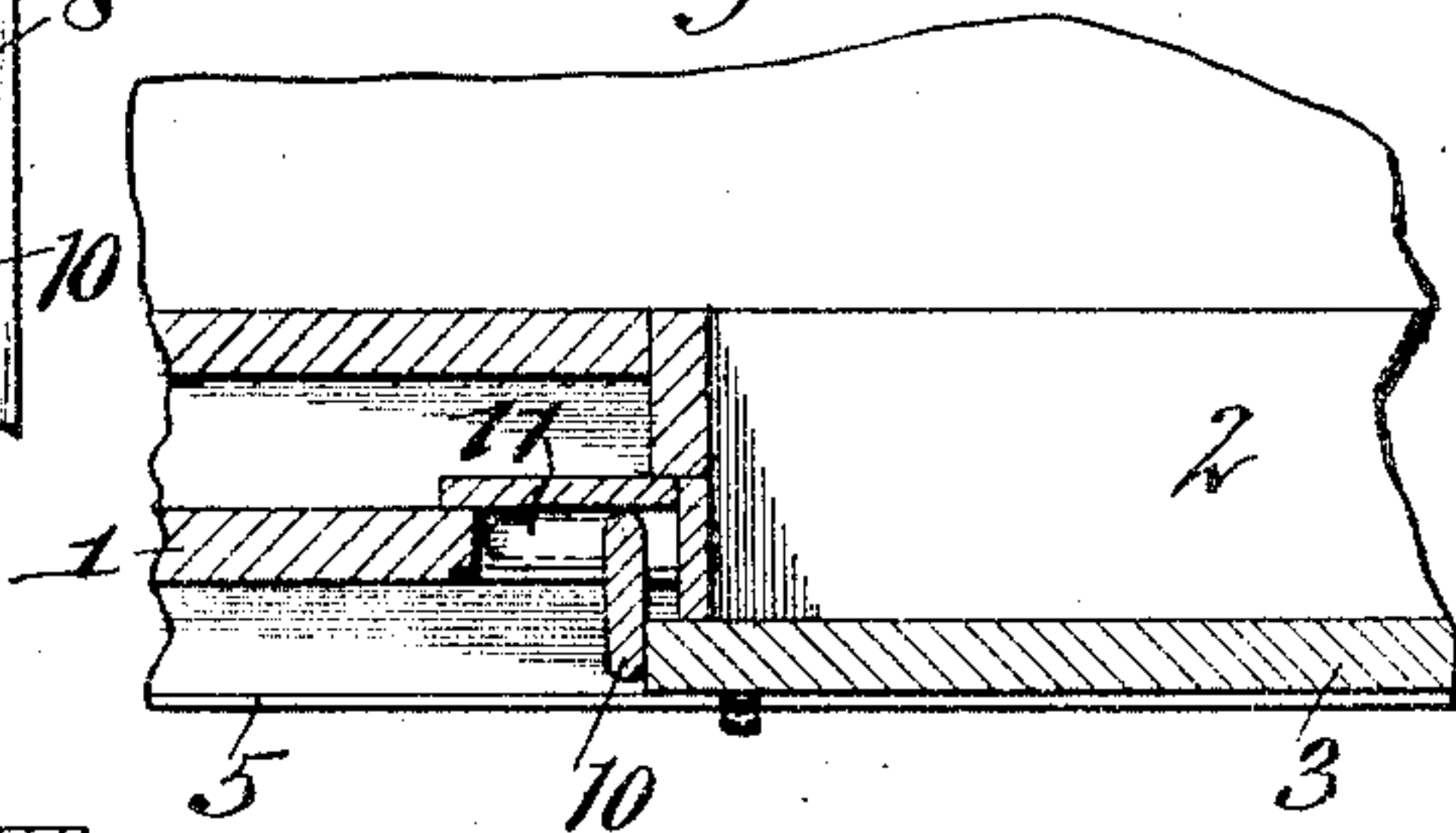
APPLICATION FILED JAN. 18, 1911.

986,786.

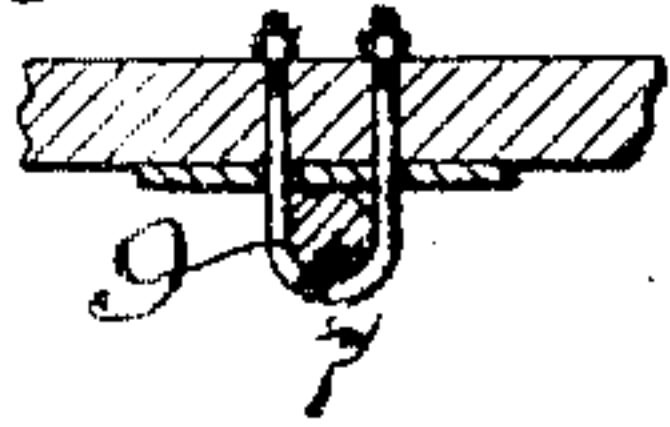
Patented Mar. 14, 1911.



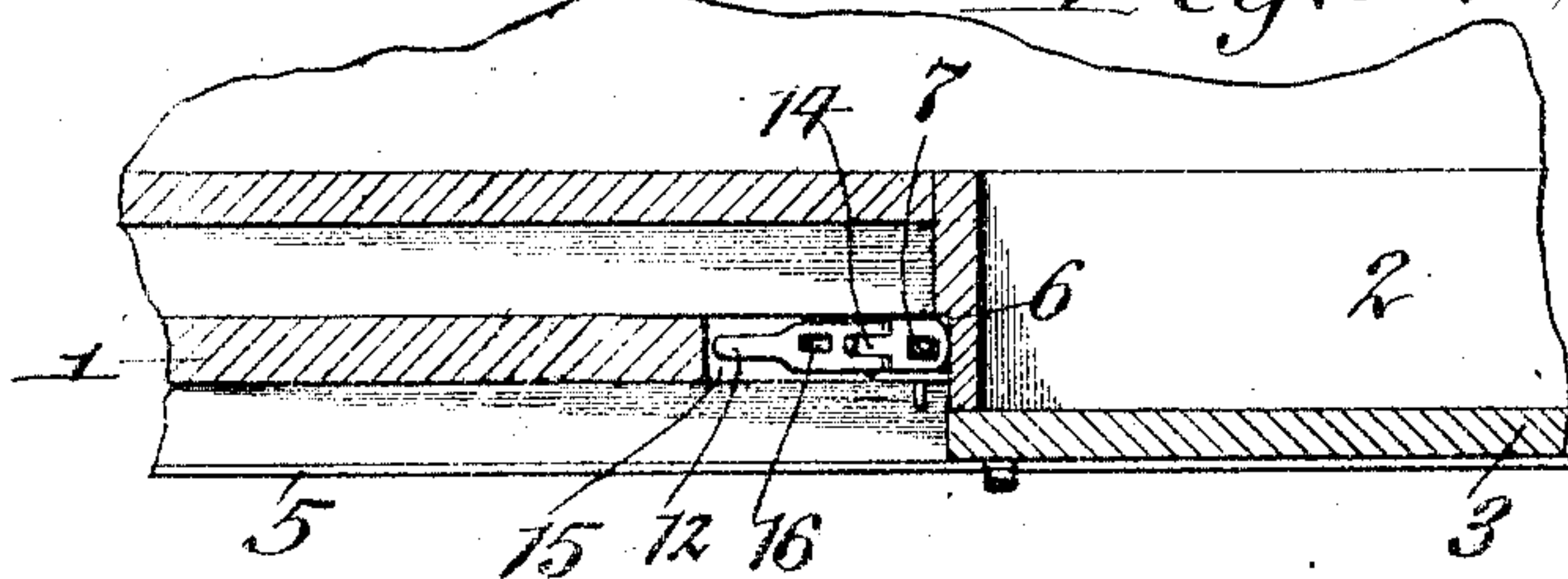
*Fig. 3.*



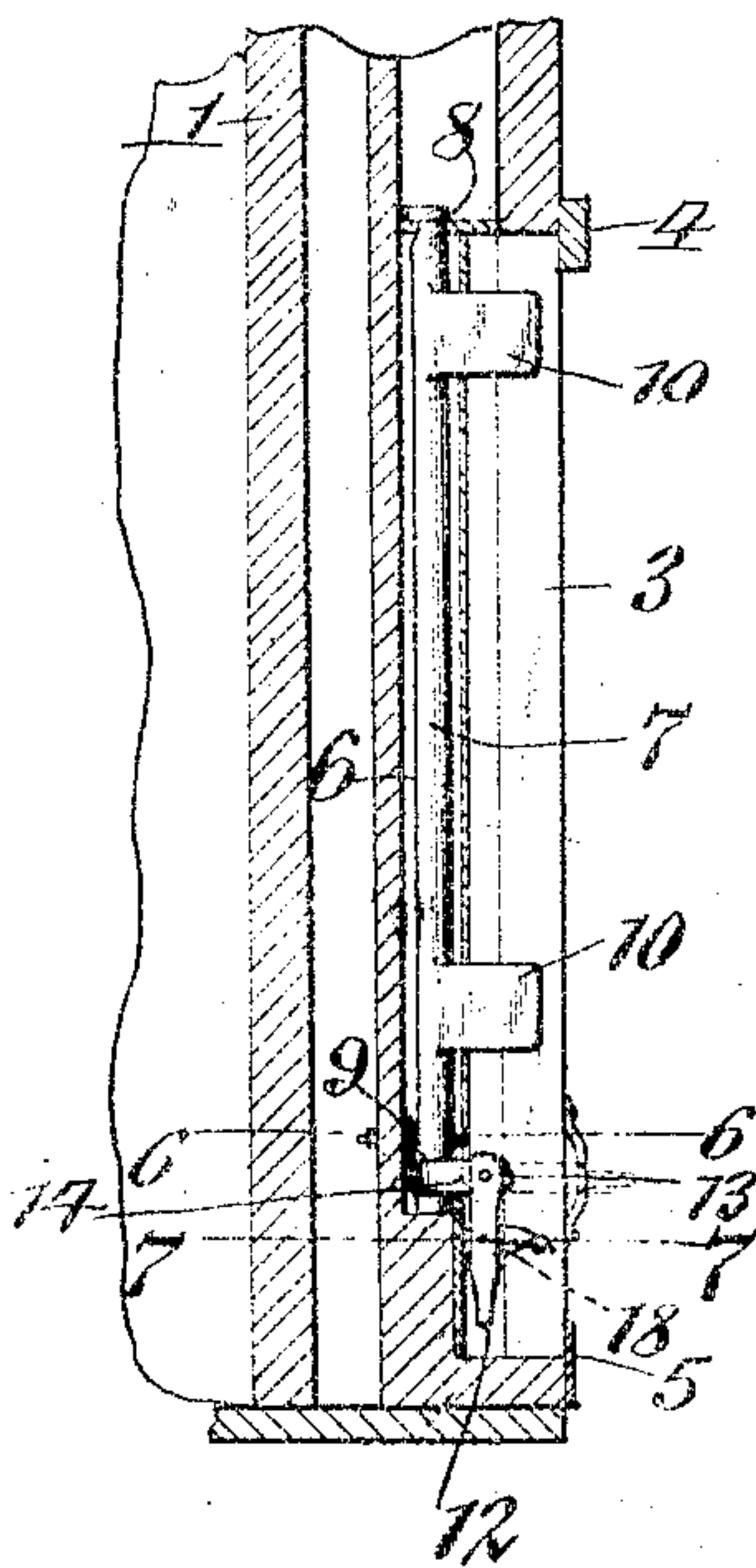
*Fig. 6.*



*Fig. 4.*



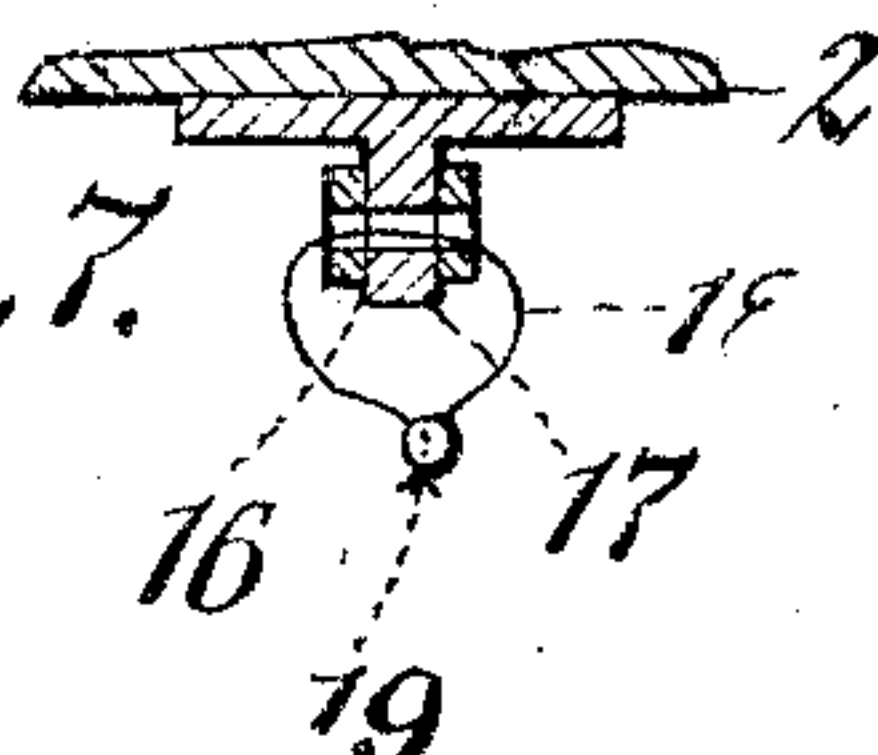
*Fig. 2.*



Witnesses:

Alfred Borkenhagen.  
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*Fig. 7.*



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# UNITED STATES PATENT OFFICE.

THOMAS H. WATTS, OF BUFFALO, NEW YORK

## CAR-DOOR LOCK.

986,786.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed January 18, 1911. Serial No. 603,271.

*To all whom it may concern:*

Be it known that I, THOMAS H. WATTS, 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 Locks, of which the following is a specification.

This invention relates to a car door lock and more particularly to that type of lock such as shown in Letters Patent of the United States No. 908,147, granted December 29, 1908.

It is the object of the present invention to provide a lock of this character which can be manipulated from the ground and which will securely hold the door in its closed position when locked and avoid interference with the same when unlocked and which can be built in the car as now constructed without requiring any material alteration in the same.

In the accompanying drawings: Figure 1 is a fragmentary side elevation of a box freight car provided with my improved door lock. Fig. 2 is a vertical transverse section in line 2—2, Fig. 1. Fig. 3 is a fragmentary horizontal section taken in line 3—3, Fig. 1. Fig. 4 is a fragmentary horizontal section taken in line 4—4, Fig. 1, but showing the locking device in the position which it occupies when the door is unlocked and free to be moved into its open position. Fig. 5 is a fragmentary side elevation showing the means for pivotally supporting the upper end of the locking shaft. Figs. 6 and 7 are fragmentary horizontal sections, on an enlarged scale, taken in lines 6—6 and 7—7, Fig. 2, respectively.

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

The parts of the box freight car which are shown in the drawings comprise a side wall 1 provided with a doorway or opening 2 in its side, and a horizontally and longitudinally sliding door 3 which is guided at its upper and lower edges on guideways 4, 5 arranged on the outer side of the car body so that this door may be moved into its open or closed position with reference to the doorway.

Adjacent to that side of the doorway where the rear edge of the door comes to rest in its closed position the side wall of the car body is provided with a comparatively long vertical pocket or chamber 6 contain-

ing an upright locking shaft 7. This shaft is arranged adjacent to the inner side of the path of the car door and is adapted to rock in a horizontal plane for which purpose the same is journaled at its upper end in a bearing 8 secured to the adjacent part of the car frame, as shown in Figs. 2 and 5, while its lower part is journaled in a bearing 9 which is constructed in the form of a clip, as shown in Figs. 2 and 6.

Near its upper and lower ends the locking shaft is provided with two laterally projecting locking lugs 10, 10 which are adapted to be turned horizontally into their unlocking position in which they are arranged parallel with the door and adjacent to the inner side of the path thereof or into a position in which these lugs project outwardly into their locking position across the path of the car door. When the car door is closed, the locking shaft may be turned so that its lugs engage crosswise with the rear edge of the door, as shown in Figs. 1, 2 and 3, thereby preventing the door from being opened, but when the shaft is turned so that its lugs clear the rear edge of the door, as shown by dotted lines in Fig. 3, then the door is unlocked and free to be pushed open past the locking lugs. To permit the locking lugs to be thus swung clear of the door the adjacent part of the side wall of the car is provided with two recesses 11 which form lateral extensions of the main pocket in which the locking shaft is arranged.

The turning of the locking shaft and lugs into and out of their operative position is effected by a mechanism which is so constructed that it also forms part of the means whereby the locking shaft may be sealed or locked in its operative position and opening of the car door is prevented without detection. The preferred means for this purpose comprise a handle or hand lever 12 which is pivoted at its inner end by a horizontal transverse pin 13 to an operating lug 14 projecting laterally from the lower end of the locking shaft so that the hand lever is capable of turning with the locking shaft but is free to swing vertically independently of the shaft.

While turning the locking shaft and lugs into and out of their operative position the hand lever is arranged horizontally, as shown by dotted lines in Figs. 1 and 2, whereby the operator is able to obtain a powerful leverage on the shaft and open or



close the same with ease notwithstanding that the shaft may work hard in its bearings or have become tight by reason of warping or twisting of the car body or in case rain or ice should affect the journals of the shaft. When the locking shaft is swung into its open position the hand lever while still in its horizontal position enters a recess 15 arranged in the side wall of the car body adjacent to the inner side of the path of the door, as shown by dotted lines in Fig. 1 and by full lines in Fig. 4, which recess forms a lateral extension of the pocket in which the shaft is journaled. After the handle has been turned outwardly while in a horizontal position with the locking shaft for engaging the locking lugs with the rear edge of the door this handle is turned downwardly independently of the rock shaft so that it assumes a vertical pendant position, as shown in Figs. 1 and 2. Upon thus swinging the hand lever downwardly a socket 16 in the same receives a sealing lug 17 which is secured to the adjacent part of the side wall on the inner side of the path of the car door.

The hand lever and sealing lug may be secured to each other by any suitable means so as to prevent tampering therewith by unauthorized persons, the means for this purpose shown in the drawings, Figs. 1, 2 and 7, consisting of a sealing wire 18 which is passed to registering openings in the hand lever and the sealing lug and a seal 19 connecting the ends of this wire.

My improved locking device is arranged wholly within the outer surface of the car so that the same is not liable to be injured by striking any obstructions which may exist along the roadway, thereby maintaining the locking device always in its working condition. Furthermore, the locking device is very strong and durable so as to securely hold the door and prevent unlawful entrance

to the car and the same can also be produced and installed at comparatively low cost. 45

I claim as my invention:

1. The combination of a car having a horizontally sliding door, an upright locking shaft journaled on the car adjacent to the inner side of the path of the door and provided with a laterally projecting locking lug adapted to be moved into and out of the path of the door upon turning the shaft, and a hand lever pivotally mounted on said shaft so as to be capable of turning horizontally with the shaft and also swinging vertically independently of said shaft, and means for interlocking said hand lever in a vertical position with the car body when the shaft is turned so that the locking lug projects across the path of the door. 50 55 60

2. The combination of a car having a horizontally sliding door, an upright locking shaft journaled on the car adjacent to the inner side of the path of the door and provided with a laterally projecting locking lug adapted to be moved into and out of the path of the door upon turning the shaft, and a hand lever pivotally mounted on said shaft so as to be capable of turning horizontally with the shaft and also swinging vertically independently of said shaft, and a locking lug arranged on the car body below said shaft and adjacent to the inner side of the car body and capable of being engaged by said hand lever upon turning the shaft so that its locking lug projects across the path of said door and the hand lever is swung into a vertical pendant position relatively to said shaft. 65 70 75 80

Witness my hand this 14th day of January, 1911.

THOMAS H. WATTS.

Witnesses:

THEO. L. FOPP,  
ANNA HEIGIS.