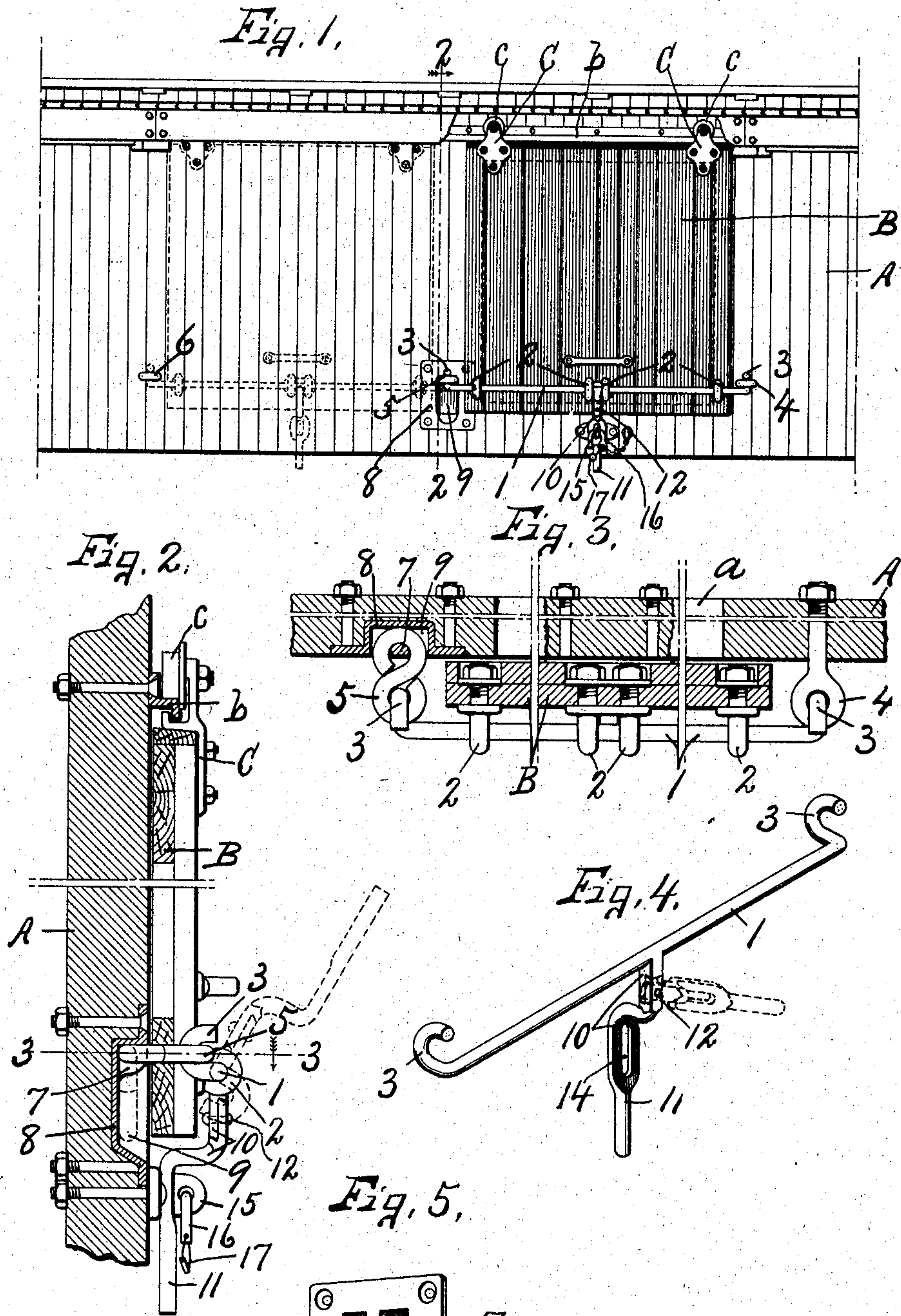


No. 791,688.

PATENTED JUNE 6, 1905.

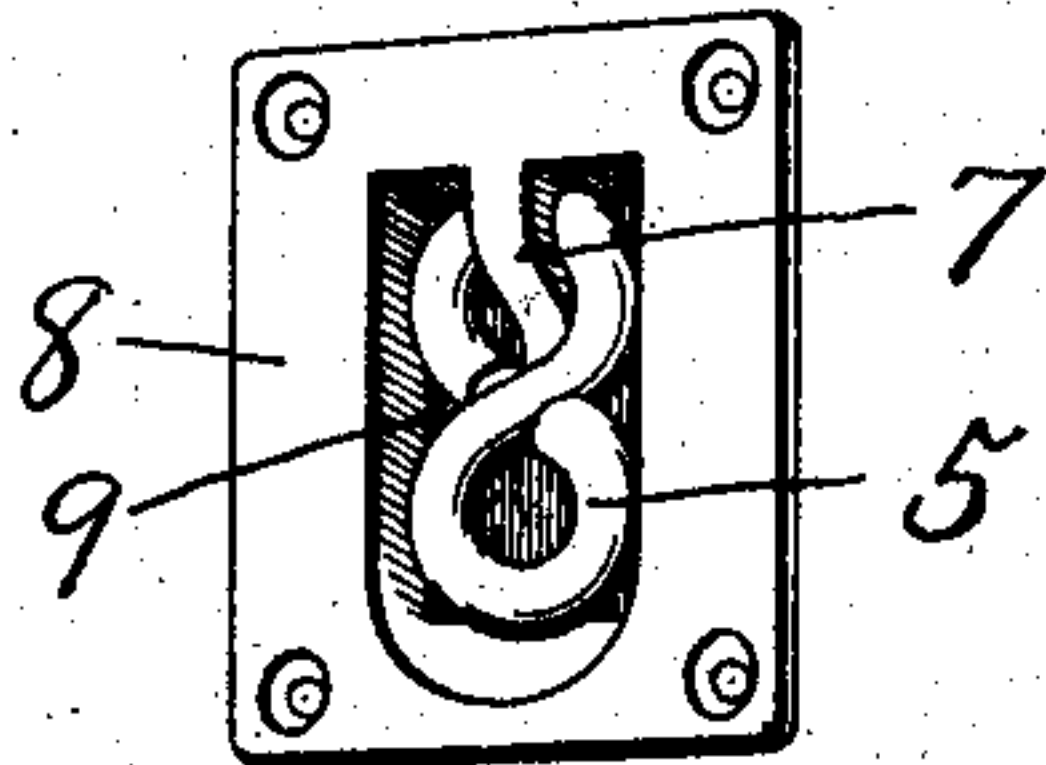
C. W. GILL.
CAR DOOR FASTENER.
APPLICATION FILED SEPT. 29, 1904.



WITNESSES:

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CHARLES W. GILL, OF MEXICO, NEW YORK.

CAR-DOOR FASTENER.

SPECIFICATION forming part of Letters Patent No. 791,688, dated June 6, 1905.

Application filed September 29, 1904. Serial No. 226,525.

To all whom it may concern:

Be it known that I, CHARLES W. GILL, of Mexico, in the county of Oswego, in the State of New York, have invented new and useful Improvements in Car-Door Fasteners, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in car-door fasteners which are adapted to be fastened or applied to any freight or box car having a sliding door. These doors are usually suspended at the top upon a suitable track extending lengthwise of the car above its door-opening, while the bottom of the door is free to swing outwardly, so that when unlocked it will readily free itself from any pressure from the inside of the car and may be more easily loosened when frozen to the car.

My main object is to provide the car with a simple, practical, and efficient attachment whereby the bottom of the door may be easily and quickly locked or unlocked at the sides and center in either its closed or open position and by a single operation.

Another object is to draw the car-door firmly against the track and against the side of the car in the same locking operation, so as to oppose any tendency of the door to jump its track.

Other more specific objects and uses will appear in the following description.

In the drawings, Figure 1 is a side elevation of a portion of a box-car and its sliding door, showing by full lines my improved fastening device as locking the door in its closed position and by dotted lines as locking the door in its open position. Figs. 2 and 3 are sectional views taken, respectively, on lines 2-2, Fig. 1, and 3-3, Fig. 2. Fig. 4 is a perspective view of the detached locking-bar. Fig. 5 is a perspective view of the plate which receives one of the locking members on the car.

A represents a box-car having a door-opening *a* and a sliding door B, which is suspended at its upper side upon a suitable track *b*, the upper side of the door being provided with hangers C, having rollers *c* riding upon the track *b*, so that the bottom of the door is free

to swing a slight distance outwardly. A rock bar or shaft 1 is journaled in suitable bearings 2 on the ends and center, but near the bottom of the door, and has its ends extending a slight distance beyond the sides of the door and formed with inwardly-projecting upturned hooks or open-sided loops 3, which are movable from the under side into and out of suitable eyes 4 and 5 on the car at opposite sides of the door-opening. The eye or anchor 4 is fixed to the car, in this instance at the right-hand side of the door-opening *a*, Fig. 1, and projects into the path of the sliding door, so as to form a limiting-stop therefor when the door is closed, and a similar limiting stop or eye 6 is secured to the car a distance to the left of the door-opening somewhat greater than the width of the door to limit the movement of said door to its open position, as shown by dotted lines, Fig. 1. The eye or anchor 5 is movable into and out of the path of the sliding door and preferably consists of a swinging link having one end pivoted to a bracket 7 of a plate 8, which is secured to and flush with the side of the car at the left of the door-opening and has a recess 9, into which the anchor 5 drops when not in use, so as to afford ample clearance for the door when moved to its open position. The openings in the eyes or anchors 4, 5, and 6 are disposed vertically, so as to receive the hooks 3 from their lower sides, and the distance between the eyes 5 and 6 is substantially the same as that between the eyes 4 and 5 to permit the locking-bar 1 to be used in locking the door in either its closed or open position, the eye 5 serving as one of the anchors in both positions of the door.

I preferably provide the center of the door with a pair of bearings 2, which are spaced a slight distance apart to receive a hand-lever or arm 10 on the center of the locking-bar midway between its ends, or hooks 3, whereby the locking-bar and door are held against undue endwise movement.

The bracket 7 is close to the upper wall of the recess 9, and this upper wall forms an abutment or limiting-stop for the link or eye 5 to prevent its being elevated beyond a horizontal position, as best seen in Fig. 2.

The lever or arm 10 is provided with a movable section 11, which has one end pivoted at 12, and its other end constitutes a swinging handpiece, so that when the car stands in cramped places where it would be impossible to rock the locking-bar with the lever 10 extended the handpiece may be folded to a position parallel with the locking-bar and still retain sufficient leverage to rock said bar to its locked or unlocked position. This handpiece is provided with a lengthwise slot 14 and constitutes a clasp which fits over and upon a suitable staple 15 and is held in place by a locking-pin 16, having a suitable seal 17, which must be broken to remove the pin.

The lever 10 and hooks 3 project in opposite directions from the axis of the bar or shaft 1, and therefore when the hooks are engaged with their respective eyes in locking the door the lever 10 hangs downwardly beneath the bottom of the door and is held in this position by its own gravity to readily engage its staple 15, which is secured to the car directly beneath the door.

In operation to unlock the door the seal 17 is first broken and the pin 16 removed from the staple 15, whereupon the operator engages and rocks the lever 10 upwardly to the position shown by dotted lines, Fig. 2, thereby rocking the shaft or bar 1 and withdrawing its hooks 3 from the eyes 4 and 5. This permits the eye 5 to drop into its recess 9 out of the path of the door B, whereupon the door may be readily moved to its open position, as shown by dotted lines, Fig. 1, and the lever is then rocked downwardly to engage the hooks 3 with the eyes 5 and 6, the operation being the same in locking the door in its closed position.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a car having an opening and a sliding door therefor, of eyes on the car at opposite sides of the opening, one of the eyes being movable into and out of the path of the door, and a rock-shaft journaled on the door and provided with hooks movable into and out of said eyes as the shaft is rocked.

2. The combination with a car having an opening and a sliding door therefor, of eyes on the car at opposite sides of the opening, one of the eyes being hinged to swing vertically, a stop for limiting the upward movement of the swinging eye, and a rock-shaft journaled in the car-door and provided with hooks movable into and out of said eyes.

3. The combination with a car having an opening and a sliding door therefor, of eyes on the car at opposite sides of the opening, one of the eyes being hinged to swing vertically, a staple secured to the car directly beneath the center of the door-opening in a plane below the eyes and a rock-shaft journaled on the door and provided with a handpiece and with hooks which enter the eyes from the under side as the handpiece is rocked downwardly said handpiece having a slot receiving the staple to additionally lock the door to the car.

4. The combination with a car having an opening and a sliding door for the opening, of eyes at opposite sides of the opening, a rock-shaft journaled on the door and provided with hooks movable into said eyes to lock the door in its closed position, and an additional eye on the car to receive one of the hooks to lock the door in its open position.

5. The combination with a car having an opening and a sliding door for the opening, of eyes at opposite sides of the opening, three eyes secured to the car in substantially the same horizontal plane and equidistant from each other, two of the eyes being located at opposite sides of the opening, and a rock-shaft on the door and provided with hooks spaced apart the same distance as the eyes so as to enter the center eye and either one of the other eyes according to the position of the door to lock said door either in its closed or in its open position.

In witness whereof I have hereunto set my hand on this 26th day of September, 1904.

CHARLES W. GILL.

Witnesses:

MILDRED M. NOTT,
HOWARD P. DENISON.