

(No Model.)

P. T. MOONEY.
CAR DOOR.

No. 521,383.

Patented June 12, 1894.

Fig. 1.

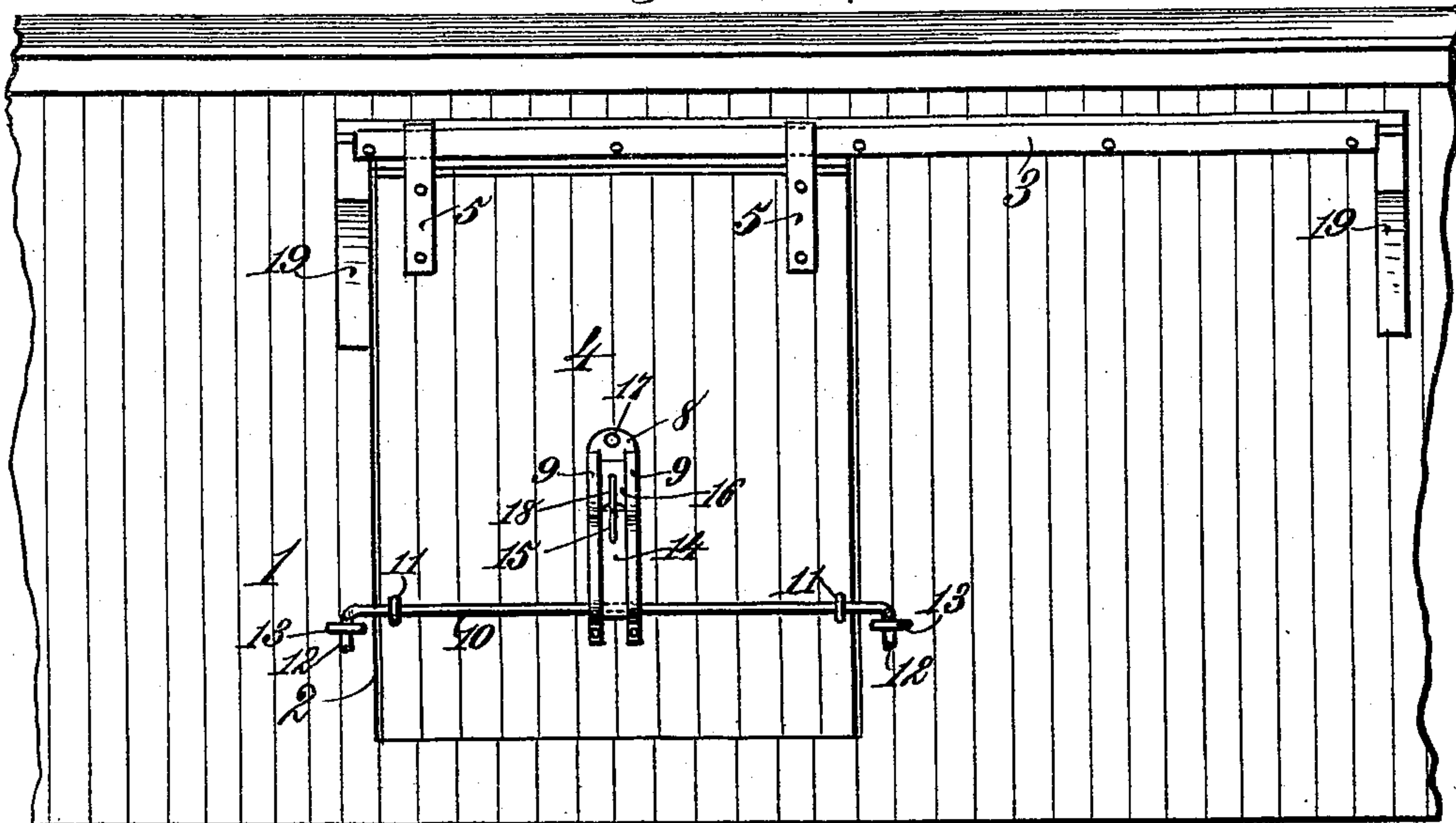


Fig. 2.

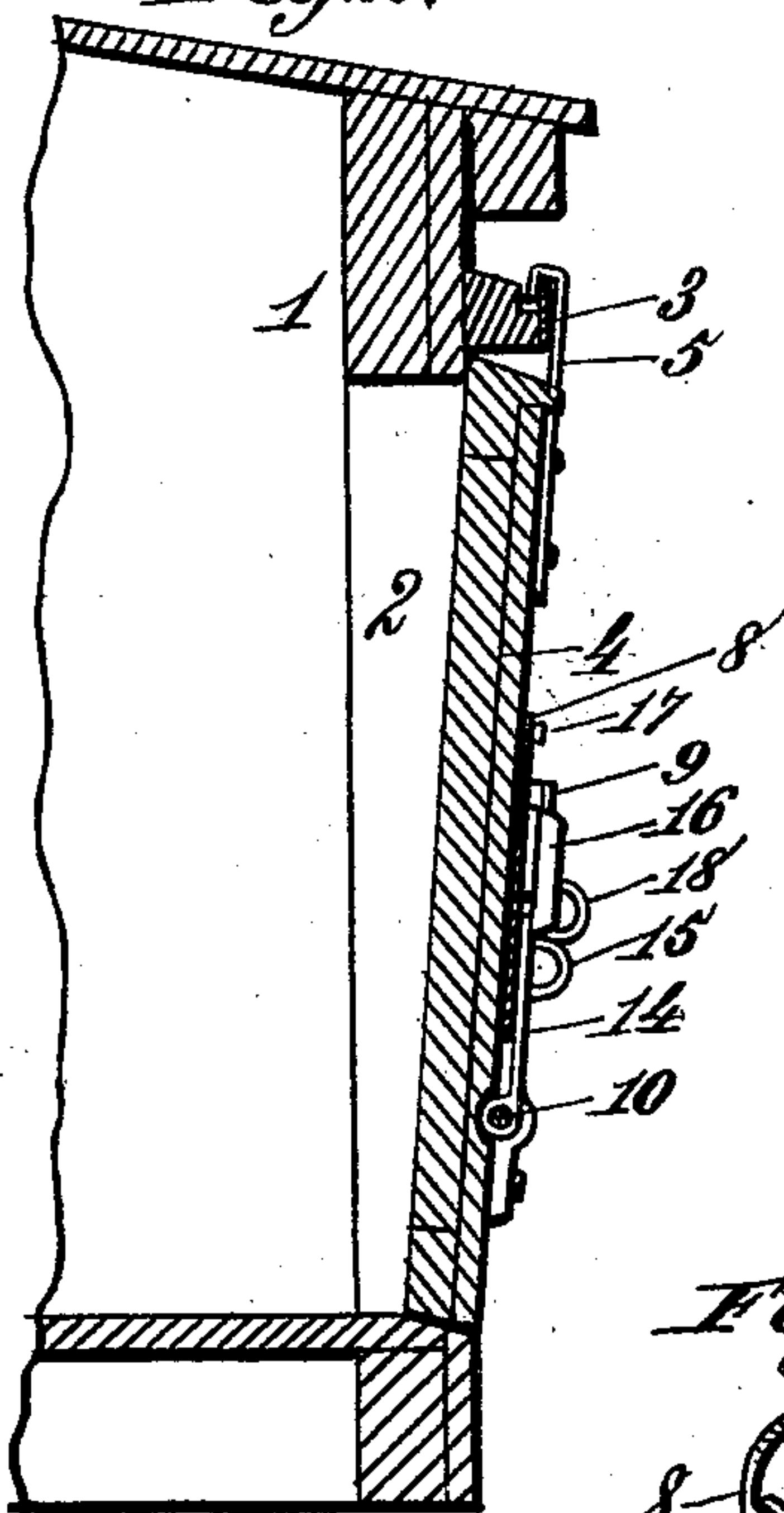


Fig. 3.

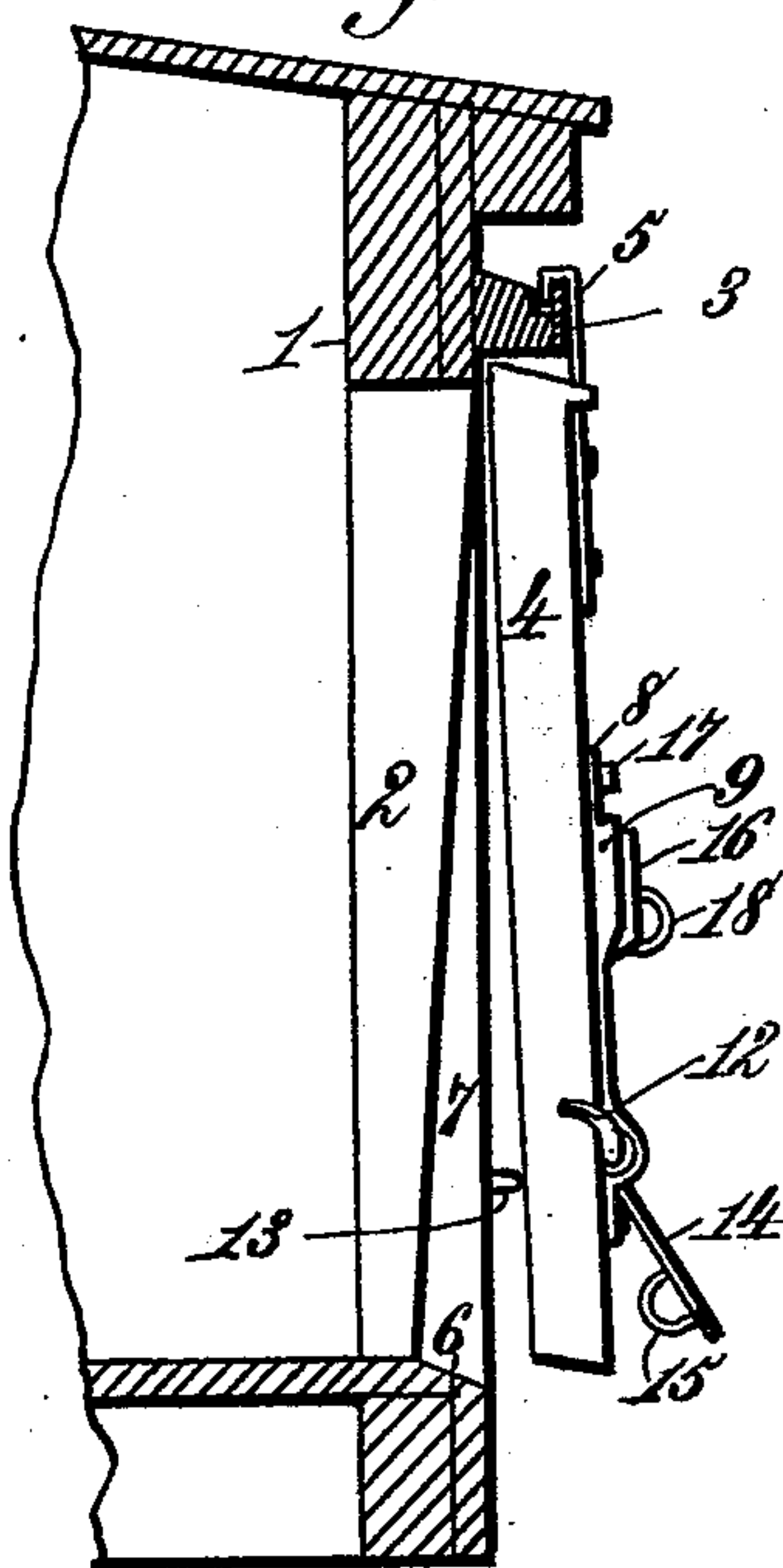
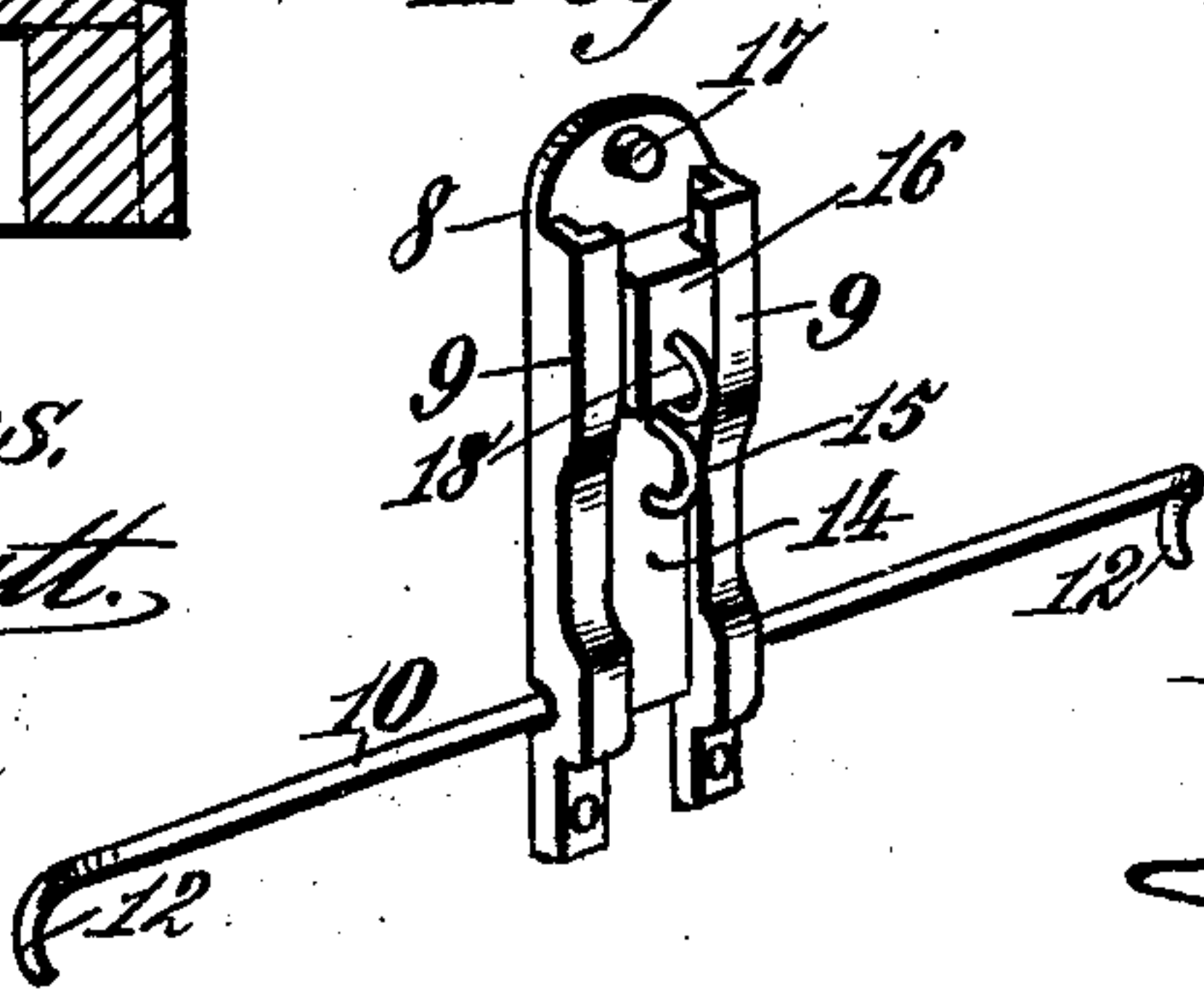


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

PATRICK T. MOONEY, OF WALNUT SPRINGS, TEXAS.

CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 521,383, dated June 12, 1894.

Application filed January 18, 1894. Serial No. 497,301. (No model.)

To all whom it may concern:

Be it known that I, PATRICK T. MOONEY, a citizen of the United States, residing at Walnut Springs, in the county of Bosque and State of Texas, have invented new and useful Improvements in Car-Doors, of which the following is a specification.

This invention relates to that class of sliding doors for freight cars, stock cars, &c., in which the car door is suspended at its upper end by means of suitable hangers engaging a track or guide rail extended above and to one side of the door-way in such manner that the door, when unfastened, may be made to slide sidewise to give access to the interior of the car.

The objects of my invention are, first, to provide a sliding car door suspended at its upper end from a track or guide-rail on the outside of the car and adapted at its lower end to have a flush fit within the bottom of the door-way; and which will, when unfastened, automatically assume a proper position to be moved along the track or guide-rail to give access to the interior of the car and, second, to provide an improved fastening that will enable the car door to be quickly and easily secured after its lower end has been closed in flush with the lower portion of the car opening or door-way.

The invention consists in certain features of construction and novel combinations of devices as hereinafter described and claimed.

In the annexed drawings—Figure 1 is a side elevation of a portion of a car provided with my improved sliding door and door fastening. Fig. 2 is a transverse vertical section showing the door closed and secured. Fig. 3 is a similar sectional view showing the door open. Fig. 4 is a detail view of the car door fastening.

In the drawings, the reference numeral 1 designates one of the side walls of a freight car, and 2 the doorway or opening.

On the outside of the car, above the doorway and extended to one side thereof is a horizontally arranged track or guide rail 3 from which the door 4 is suspended. The upper end of the door is provided with hangers 5 that may be of any suitable or well known construction. These hangers 5 are engaged with the track or rail 3 in such manner as to permit the door to slide along said track or

rail and also to have an outward and inward swinging movement with relation to the side wall of the car. The lower edge or bottom of the car door 4 is beveled downward from its inner to its outer face to correspond with a similar beveling of the sill or bottom piece 6 of the doorway, and the door is of such length and width that when closed its lower end will fit snugly onto the sill of the doorway in such manner that the outer face of the lower end of the door will be flush with the outside of the car body. The vertical jambs at both sides of the door-way 2, are cut away to provide seats 7, the front faces of which are inclined downward and inward. The lower ends of these seats terminate, on their front faces, at the inner edge of the beveled portion of the door sill, while their upper ends are very nearly, or quite, flush with the outside of the car wall. It will thus be seen that while the upper portion or end of the closed door is outside the car and requires but little range of movement in opening and closing, the lower end of the door, when closed, has its outer face flush with the outer face of the car wall and its beveled lower edge resting firmly on the beveled sill of the doorway. By this construction the car door is made very close fitting without any liability of becoming jammed or wedged when closed, and offers less opportunity for being pried open. It also presents less projecting surface at its lower portion where it would, otherwise, be most likely to be struck and marred or broken by contact with obstructions along the road. The door 2, when fastened, lies in an inclined position as shown in the drawings, and when the fastening means are released said door will swing slightly on the track or guide-rail by gravity until it assumes a vertical position, which is the proper position to permit it to be moved along the said track or guide-rail to give access to the interior of the car.

To the outer face of the door 4 is secured a plate 8 having vertically arranged inwardly projecting ribs or guide-bars 9 on each side. The lower ends of these guide-bars 9 may provide central bearings for a horizontally arranged rock-shaft 10 that is arranged across the lower portion of the car door. The rock-shaft 10 also has other bearings 11 on the

outer face of the door, near its two side edges. At its opposite ends the rock-shaft 10 is provided with crank arms 12 that project beyond the door and are adapted to be engaged in staples or fastening loops 13 secured to the car body on the two sides of the doorway. A lever 14 is secured to the rock shaft 10 between its two central bearings in the ends of the guide bars 9 so that the lever can be turned upward between said bars when the shaft is rocked into position to bring the hooked ends of the cranks 12 and staples 13 into locking engagement. The front upper portion of the lever 14 is provided with an outward projecting loop, eye or staple 15 which may serve as a handle for the lever and, also, as part of the means for locking the car door, as presently explained. The inner sides of the upper portions of the guide-bars 9 are constructed to receive and hold a gravity latch 16, the lower end of which will drop in front of the upper end of the lever 14 when the latter is turned up between the guide bars 9 in which said latch 16 works. A stop-pin or stud 17 limits the upward movement of the gravity latch 16 on the front of which is a staple, loop or eye 18 which may be locked with the similar staple 15 on the lever 14 by means of a padlock or other approved locking device. In moving the sliding door into position to close the doorway of the car the lever 14 will be thrown outward and downward to rock the shaft 10 into such position as will carry the hooked ends of the cranks 12 inward and above the staples or loops 13, so as to readily engage therewith when the lever 14 is turned upward and inward. This upward and inward movement of the lever 14, the door being properly and squarely in front of the doorway, will cause the rock shaft 10 to rock or oscillate in such direction as to carry the hooked ends of the cranks 12 downward into the respective staples 13 and will exert such leverage as suffices to close the door tightly and securely. As soon as the lever 14 is thus forced fully back between the guide-bars 9 the gravity latch 16 will drop in front of the upper end of said lever, thereby latching it. A seal lock of any appropriate character or a padlock, or other convenient locking device may now be engaged with the staples 15 and 18 and thus fasten the car door securely. To unfasten and open the door the locking de-

vice is disengaged from the staples 15 and 18, the lever 14 is thrown outward and downward, thereby causing the rock-shaft 10 to lift the hooked cranks 12 from out of engagement with the staples 13, so that the lower end of the unfastened door will swing outward automatically into a vertical position and the door can then be moved along the track 3 to afford access to the interior of the car. At the ends of the track or guide-rail 3 are stops 19 to limit the sidewise movements of the sliding door.

What I claim as my invention is—

1. The combination with a freight-car having a doorway provided with a beveled sill and vertical side jambs which are cut away to form seats the front faces of which are inclined downwardly and inwardly, of a track arranged above the doorway, and a sliding and swinging car-door provided with rigidly attached hangers suspended by the track, said door seating, when closed, in an inclined position in the doorway and normally assuming, by gravity, a proper position to be moved along said track, substantially as described.

2. The combination with a freight-car having a doorway provided with a beveled sill and vertical side jambs which are cut away to form seats the front faces of which are inclined downwardly and inwardly, of a track arranged above the doorway, a sliding and swinging car-door provided with rigidly attached hangers suspended by the track and seating in an inclined position in the doorway when closed and fastened and normally assuming, by gravity, a proper position to be moved along said track when unfastened, a rock-shaft extending across the outside of the door and having hooked cranks, a lever secured to said rock-shaft and provided with a staple, and a gravity latch also provided with a staple and adapted to drop in front of the upturned end of the lever said staples of the latch and lever being adapted to be connected by a lock, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

PATRICK T. MOONEY.

Witnesses:

L. W. CAMPBELL,
OSCAR N. WIEL.