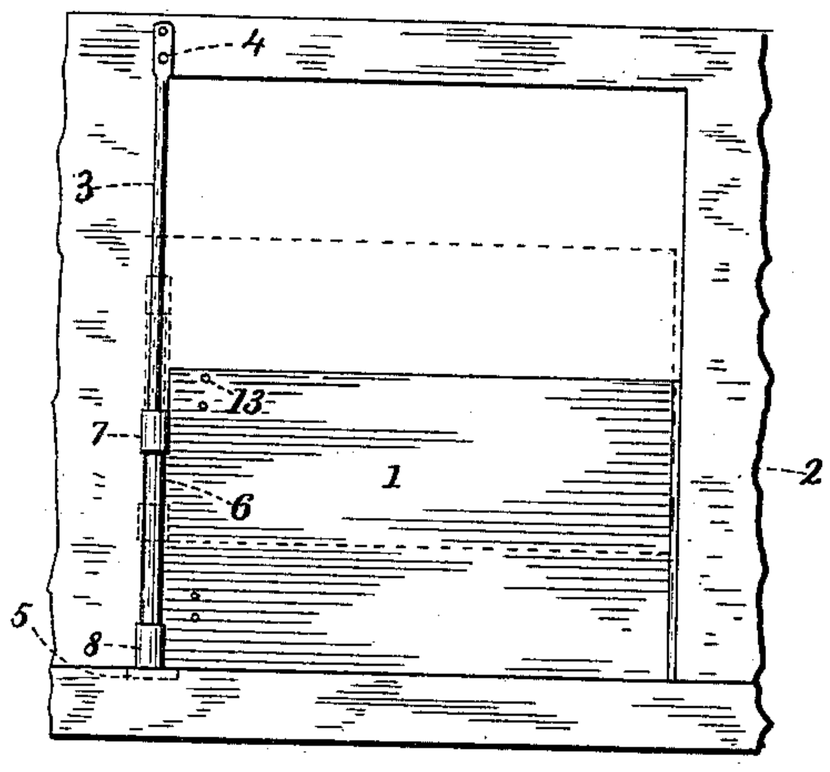
(No Model.)

J. MONTGOMERY.

FREIGHT CAR DOOR.

No. 410,694. Patented Sept. 10, 1889.

Fig. 1.



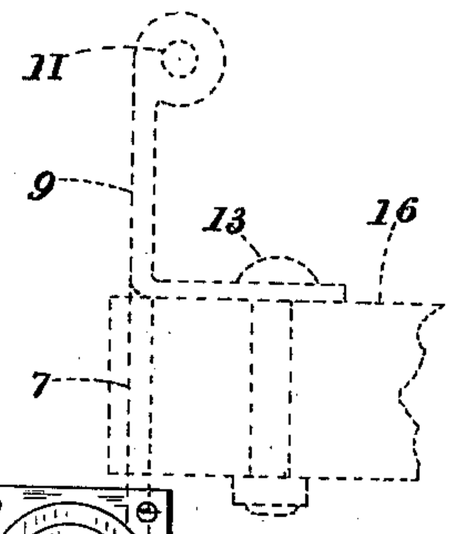


Fig. 2.

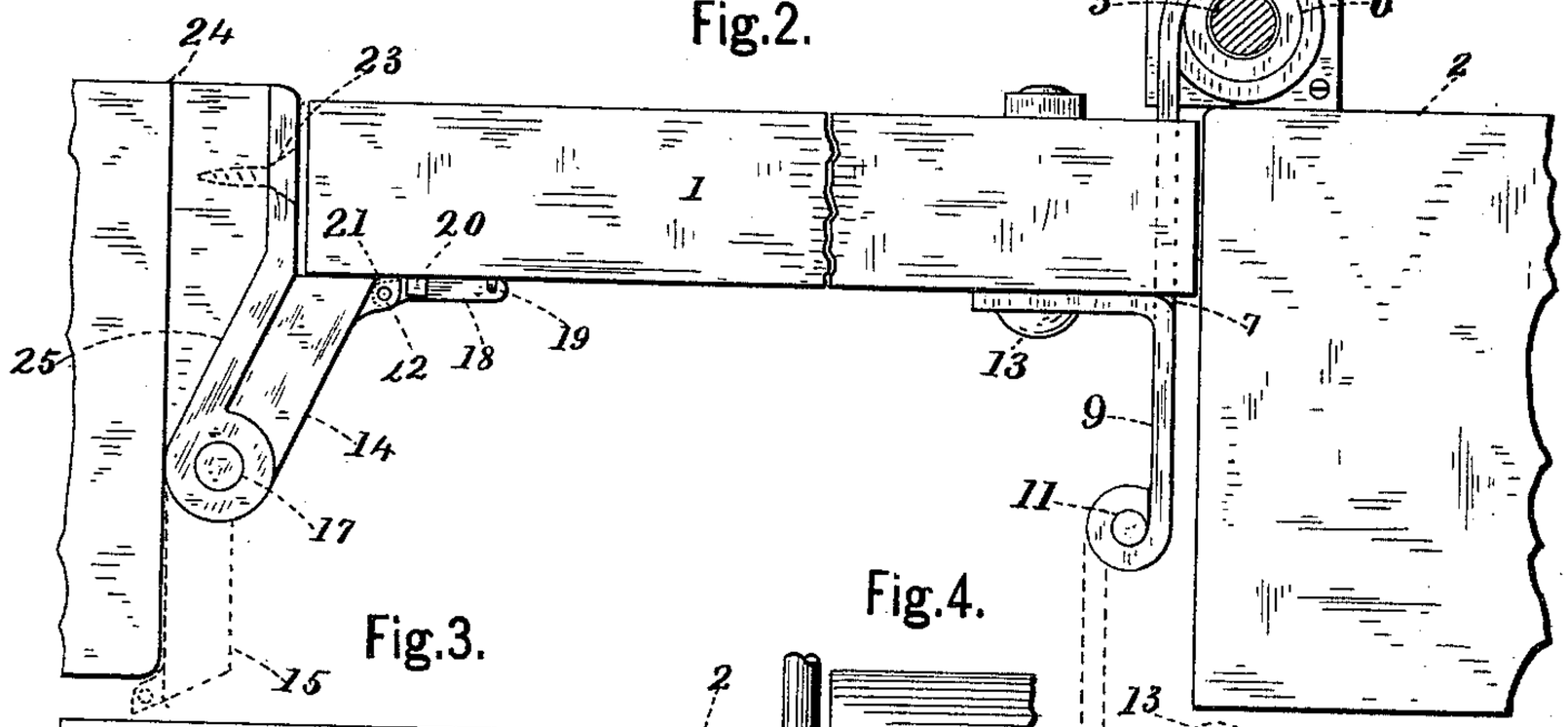


Fig. 3.

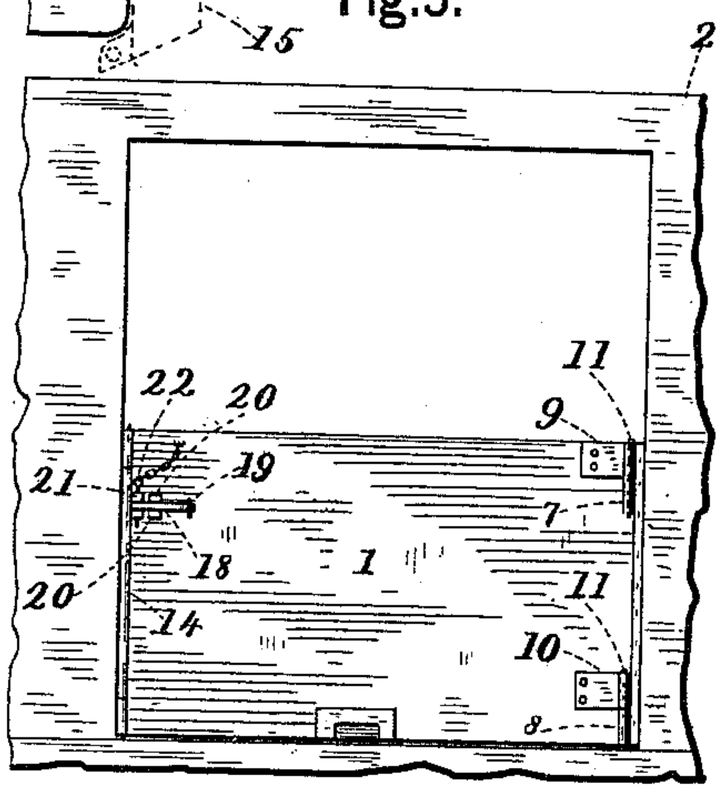
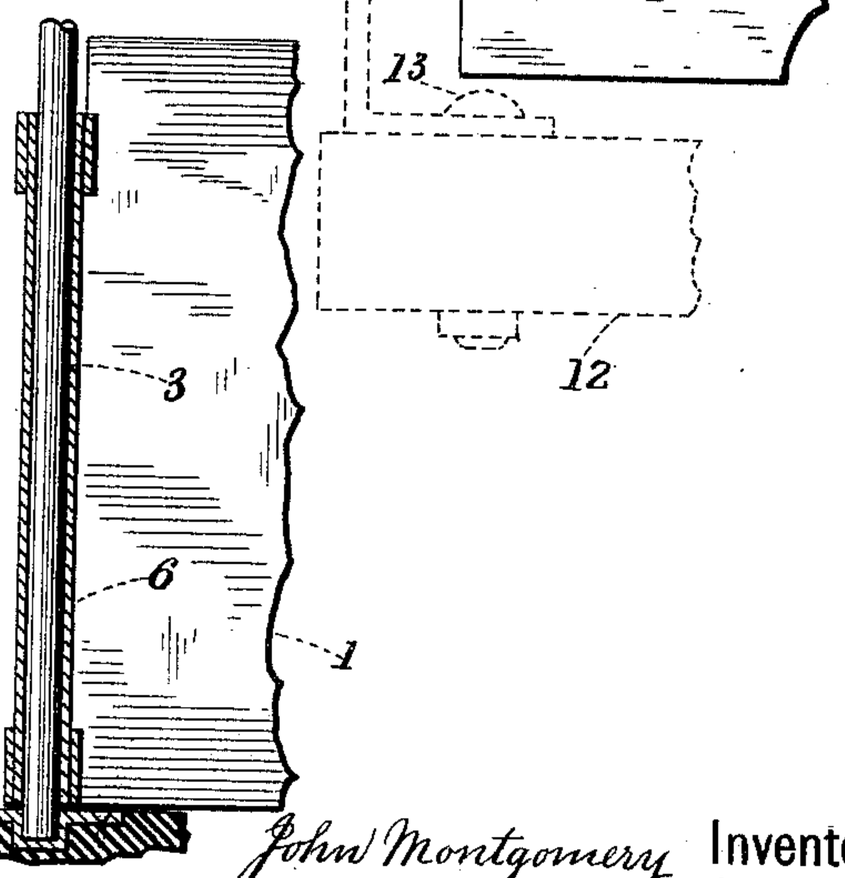


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN MONTGOMERY, OF JARVIS, ONTARIO, CANADA.

FREIGHT-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 410,694, dated September 10, 1889.

Application filed May 6, 1889. Serial No. 309,723. (No model.)

To all whom it may concern:

Be it known that I, JOHN MONTGOMERY, a subject of the Queen of Great Britain, residing in Jarvis, in the county of Haldermand, in the province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Freight-Car Doors, of which the following is a specification.

The object of my invention is to provide a convenient and efficient inside car-door for freight-cars, which may be either lifted up, when required, or opened inside or outside of the car, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a car-door and a portion of a car to which it is connected, looking at it from the inside, showing the position of the several parts as seen from that side when the door is closed, and also showing it when raised up by dotted lines. Fig. 2 is an enlarged top view of the door and its operating and connecting parts, showing the different positions of the door and other operating portions by dotted lines, showing also a horizontal section through the upper part of the pivotal bar. Fig. 3 is a front elevation of the door and connecting portions, showing the normal position of all the parts when closed. Fig. 4 is a sectional elevation showing a portion of the vertical rod upon which the door turns and is raised or lowered, showing also a section through the pipe forming a portion of the hinge upon which the door swings.

In said drawings, 1 represents the door. It is preferably constructed of wood in the usual way, but may be made of any other suitable material.

To one side of the door-post 2, on the inside of the car, is rigidly secured a strong round iron bar 3, having its upper end secured to the door-post 2 by screws 4, (shown in Fig. 1,) and its lower end secured by passing into a metallic step 5. (Shown in Fig. 4.) Over this bar 3 is passed a piece of gas-pipe 6, adapted to be easily moved up or down or turned on the bar 3. To this pipe 6 is rigidly secured the hinges 7 and 8, and on the top of each hinge 7 and 8 is a supplementary hinge 9 and 10, secured thereto by pin 11, passing through and secured in the usual way to both hinges, thereby making a double hinge of each, so that when the door is closed, as in Fig. 2, the hinges 9 and 10 are brought into line and secured to the door by bolts 13, as there shown. When the door is opened outside, the hinges 7 and 8 remain inactive, while the hinges 9 and 10 turn upon the pins or centers 11 as the door is opening out in the position shown by the dotted lines 12.

When opening the door outside, as above described, the check-bar 14 must first be opened into the position shown by the dotted lines 15. This gives the end of the door room to pass. Otherwise it could not be opened, as the check-bar holds it firmly when required. When it is desired to open the door inside of the car from the position shown by the dotted lines 12, the hinges 9 and 10 swing around on their pins 11 in the position shown at 9 in Fig. 2. Then the whole—the hinges 9 and 10—swing together with the hinges 7 and 8 on the vertical bar 3 until the door opens back into the car in the position shown by the dotted lines 16. When it is desired to close the door and keep it shut, the check-bar 14 is turned on its pin 17 until in the position shown in Fig. 2, in which position the door is held securely. This check-bar is secured by screws 23 to the post 24, passing through the plate 25, to which it is pivoted. To keep the door rigidly in place and from moving up or down, I employ a latch 18, secured to the door by a staple 19, upon which it turns, having its opposite end kept from moving to either side by two projecting lugs 20. On the check-bar 14 is secured two projecting lugs 21, between which the end of the latch passes, and is secured by a pin 22, which passes into holes in the lugs 21 and through a hole in the end of the latch. (See Fig. 3.) This door is adapted to be used on any kind of a freight-car and to meet all the requirements of a freight-car door.

Under certain conditions—when the car is loaded with grain, for instance—it is of advantage to raise the door more or less and take the grain out from below it either by shoveling or by permitting it to run out. When the car is used for other kinds of freight

and the inside door is not required for use, it is turned back inside of the car, out of the way, and it is often, under certain conditions, of advantage to open the door outside, all of which is provided for by this device.

I claim as my invention—

1. A freight-car door consisting of a door 1, provided with double hinges mounted on a vertical pivotal bar, so as to be capable of opening either inside or outside of the car or of being moved up or down on the pivotal bar, in combination with a pivoted check-bar 14 and a latch-fastening device, substantially as described.

2. In a hinged car-door, the combination therewith of a pivoted check-bar and a latch-fastening device for holding it closed or permitting it to open outward, substantially as and for the purposes described.

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Witnesses:

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