

(No Model.)

J. B. BATT.  
FREIGHT CAR DOOR.

No. 372,105.

Patented Oct. 25, 1887.

Fig. 1.

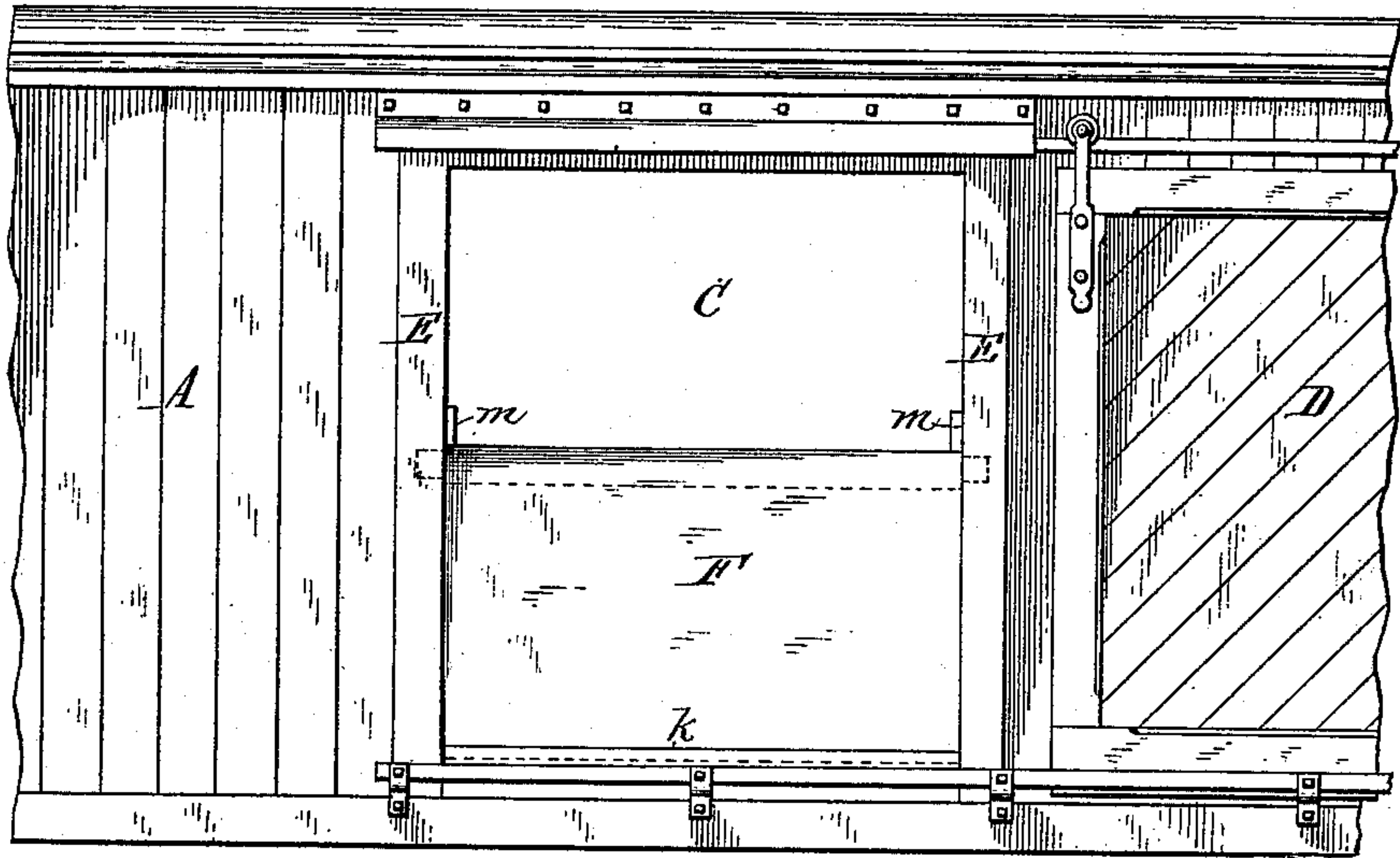


Fig. 2.

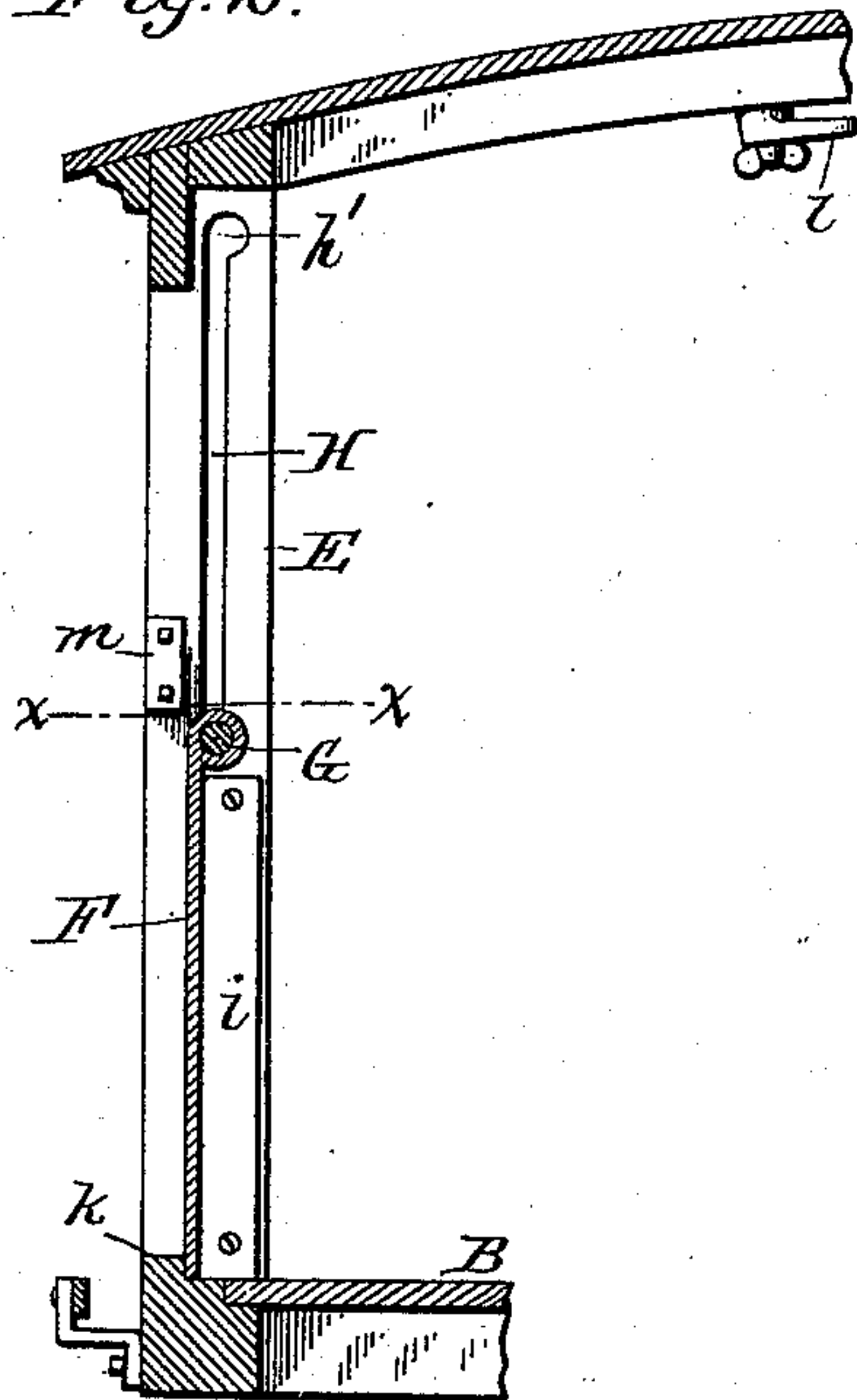


Fig. 3.

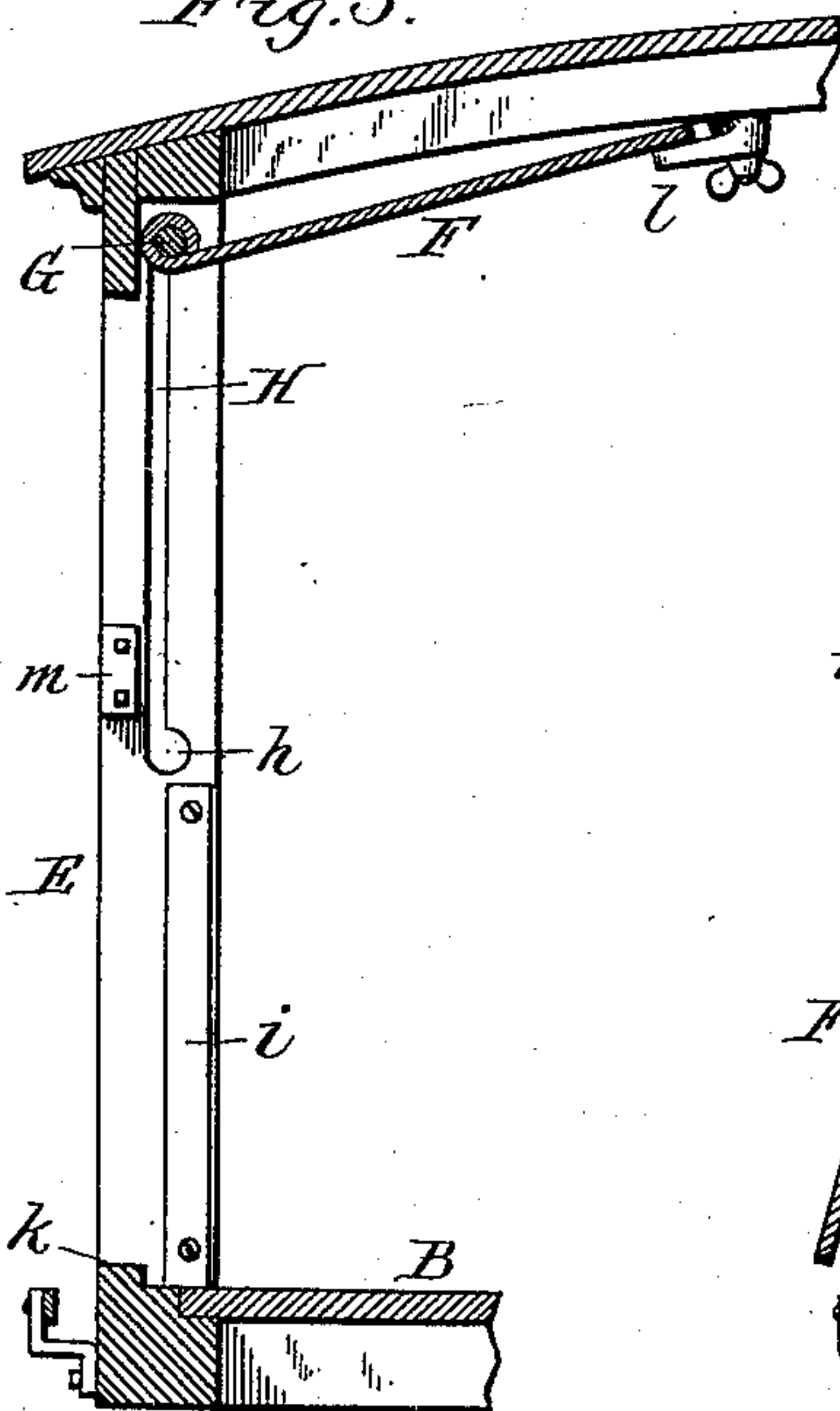


Fig. 4.

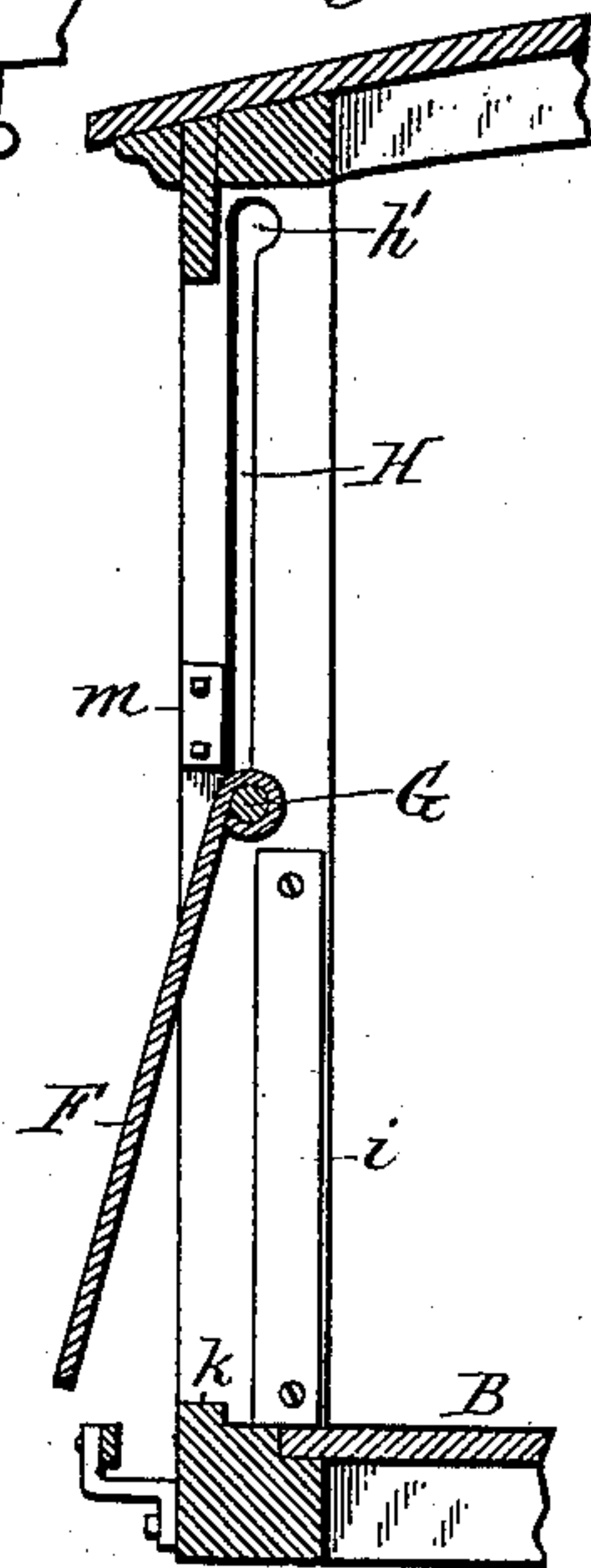


Fig. 5.

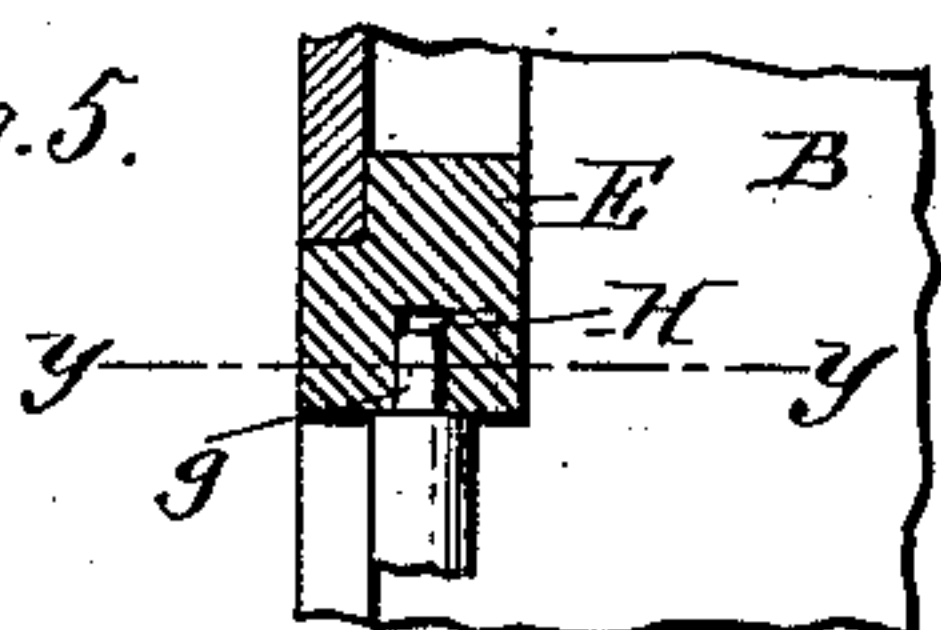


Fig. 7.

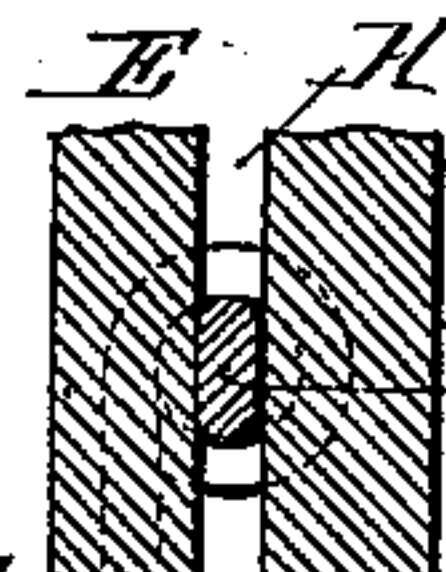
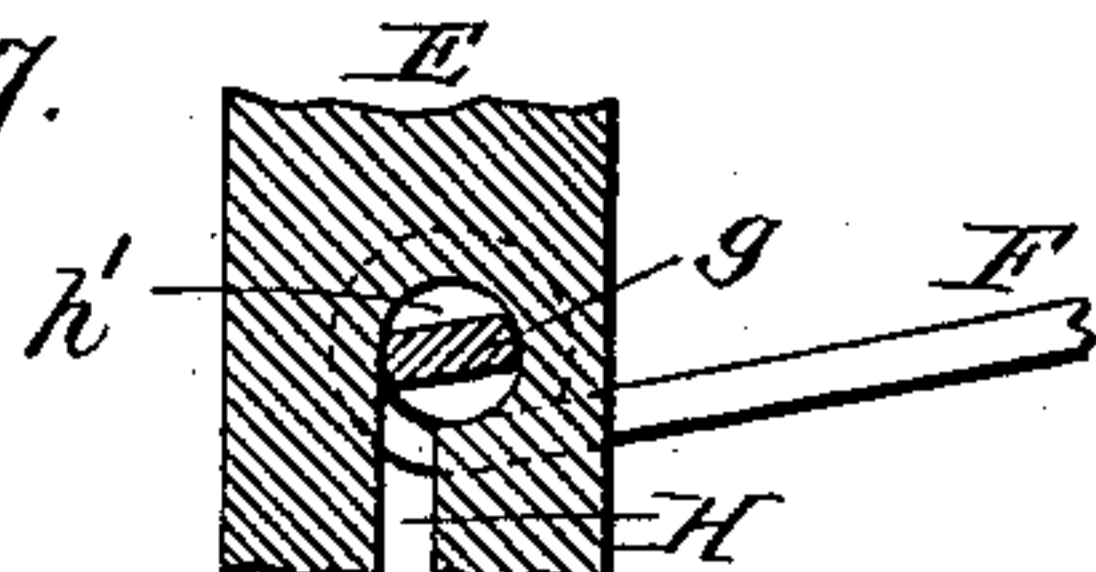


Fig. 6.

Theo. L. Popp  
Geo. Buchheit Jr. Witnesses.

John B. Batt Inventor.  
By Wilhelm Bomer. Attorneys.



# UNITED STATES PATENT OFFICE.

JOHN B. BATT, OF WILLIAMSVILLE, ASSIGNOR OF ONE-HALF TO LORENZ GEBHARD, OF BUFFALO, NEW YORK.

## FREIGHT-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 372,105, dated October 25, 1887.

Application filed December 22, 1886. Serial No. 222,250. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN B. BATT, of Williamsville, in the county of Erie and State of New York, have invented a new and useful Improvement in Freight-Car Doors, of which the following is a specification.

This invention relates to an improvement in the doors or gates of freight-cars, which are arranged inside of the car and adapted to close the entrance in the sides of the car, whereby grain and other material in bulk can be confined in the car independently of the outside sliding doors.

The object of my invention is to provide freight-cars with simple and inexpensive doors or gates which can be readily arranged in place when required for use, and which are so constructed that they can be readily swung out of the way when they are not required.

The invention consists of the improvements which will be hereinafter fully set forth, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a fragmentary side elevation of a freight-car provided with my improvement. Fig. 2 is a vertical cross-section showing the door lowered and closing the entrance. Fig. 3 is a similar view with the door raised and swung out of the way. Fig. 4 is a vertical section showing the door lowered and swung outward from the bottom of the car. Fig. 5 is a horizontal section in line *x x*, Fig. 2. Fig. 6 is a vertical section in line *y y*, Fig. 5, on an enlarged scale. Fig. 7 is a vertical section of the upper portion of one of the side posts.

Like letters of reference refer to like parts in the several figures.

A represents one of the sides of a freight-car; B, the floor; C, the opening or entrance formed in the side of the car; and D, the sliding door arranged on the outside of the car in the usual manner for closing the entrance C.

E represents the vertical posts which form the sides of the entrance C, and F represents the inside door or gate, which is arranged between the posts E and adapted to close the entrance. The door F is made of the proper length to fit snugly between the sides of the two posts E and permit the door to swing inwardly and outwardly between the posts.

The door F is preferably constructed of sheet metal of the desired thickness, and is provided at its top with a horizontal bar or rod, G, the ends *g* of which project from the sides of the door and enter vertical slots or grooves H formed in the posts E. The slots or grooves H are formed in the sides of the posts facing the opening or entrance C, and extend from a short distance below the roof of the car downwardly to the upper edge or top of the door, when the latter is in the position shown in Fig. 2, with its lower edge or bottom resting upon the floor of the car.

*h* represents a circular recess or enlargement formed at the bottom of each groove H, and *h'* represents similar recesses or enlargements formed at the opposite ends of the grooves H.

The ends of the rods G, when seated in the recesses *h* of the grooves, form pivots for the door and permit the door to swing outwardly, as shown in Fig. 4.

*i* represents vertical strips secured to the posts E and projecting into the opening or space between the two posts, so as to form stops, whereby the door is prevented from swinging inwardly past the posts.

*k* represents a horizontal ledge extending across the bottom of the opening or entrance and projecting slightly above the floor of the car so as to form a stop, whereby the door is prevented from swinging outwardly.

When the door is in the position shown in Fig. 2, with its bottom resting upon the floor of the car, the door is held from swinging outwardly by the stop *k* and inwardly by the stops *i*, and is held in a vertical position to close the opening or entrance. Upon lifting or raising the door until its lower edge will clear the stop *k*, the door is permitted to swing outwardly for unloading the car, the recesses *h* being made sufficiently large to permit a slight vertical movement of the pivots in the recesses *h*. The pivots *g* of the door are flattened on two opposite sides, as shown in Figs. 5 and 6, to permit the pivots to enter the grooves H of the posts when the door is in a vertical position. Upon sliding the door upwardly between the posts E, the door is guided in its vertical movement by the pivots *g* en-



gaging in the grooves H. When the pivots *g* have reached the recesses *h'* at the upper ends of the grooves H, the door is swung inwardly and upwardly against the under side of the roof of the car, as shown in Fig. 3, where it is fastened in place by a turn-button or catch, *l*. The grooves H are of the proper width to permit the pivots to fit snugly therein without turning, so that the door is prevented from swinging on its pivots between the posts until its pivots have reached either end of the grooves and are seated in the recesses *h* or *h'*. These recesses *h* and *h'* are wider than the grooves H, so as to permit the pivots *g* of the door to turn freely therein. When the door has been swung inwardly and upwardly against the roof of the car, as shown in Fig. 3, the pivots *g* are turned in the recesses *h'*, with their wide sides at right angles, or nearly so, with the grooves H, as shown in Fig. 7, and when in this position the pivots are prevented from dropping or sliding down in the grooves. The door is supported in this position, when it is not required, by the pivots resting in the recesses *h'* and the turn-button *l*.

The door is readily lowered, when required, by turning the button *l* and swinging the door downwardly until the door has assumed a vertical position, when the pivots will again engage in the grooves H and permit the door to slide downwardly between the posts until the pivots rest in the lower recesses, *h*.

*m* represents stops secured to the posts E outside of the grooves H, whereby the door is prevented from swinging outwardly past the posts when the door has been released from the button *l*.

I claim as my invention—

In a freight-car, the combination, with the vertical posts E, provided in their opposing inner faces with vertical grooves H, having enlargements *h* at their lower ends, of a door, F, fitted with its lateral edges between the inner faces of the posts E, which latter have their opposing inner faces arranged outside of the lateral edges of the door, permitting the door to swing outwardly, flat pivots *g* secured to the door, which prevent the door from swinging when engaged in the grooves H, and permit the door to swing outwardly when engaged in the enlargements *h*, and a bottom stop, *k*, bearing against the outer bottom edge of the door and holding the same against the pressure of the load until lifted over said bottom stop, substantially as set forth.

Witness my hand this 1st day of December, 1886.

JOHN B. BATT.

Witnesses:

CARL F. GEYER,  
JNO. J. BONNER.