

(No Model.)

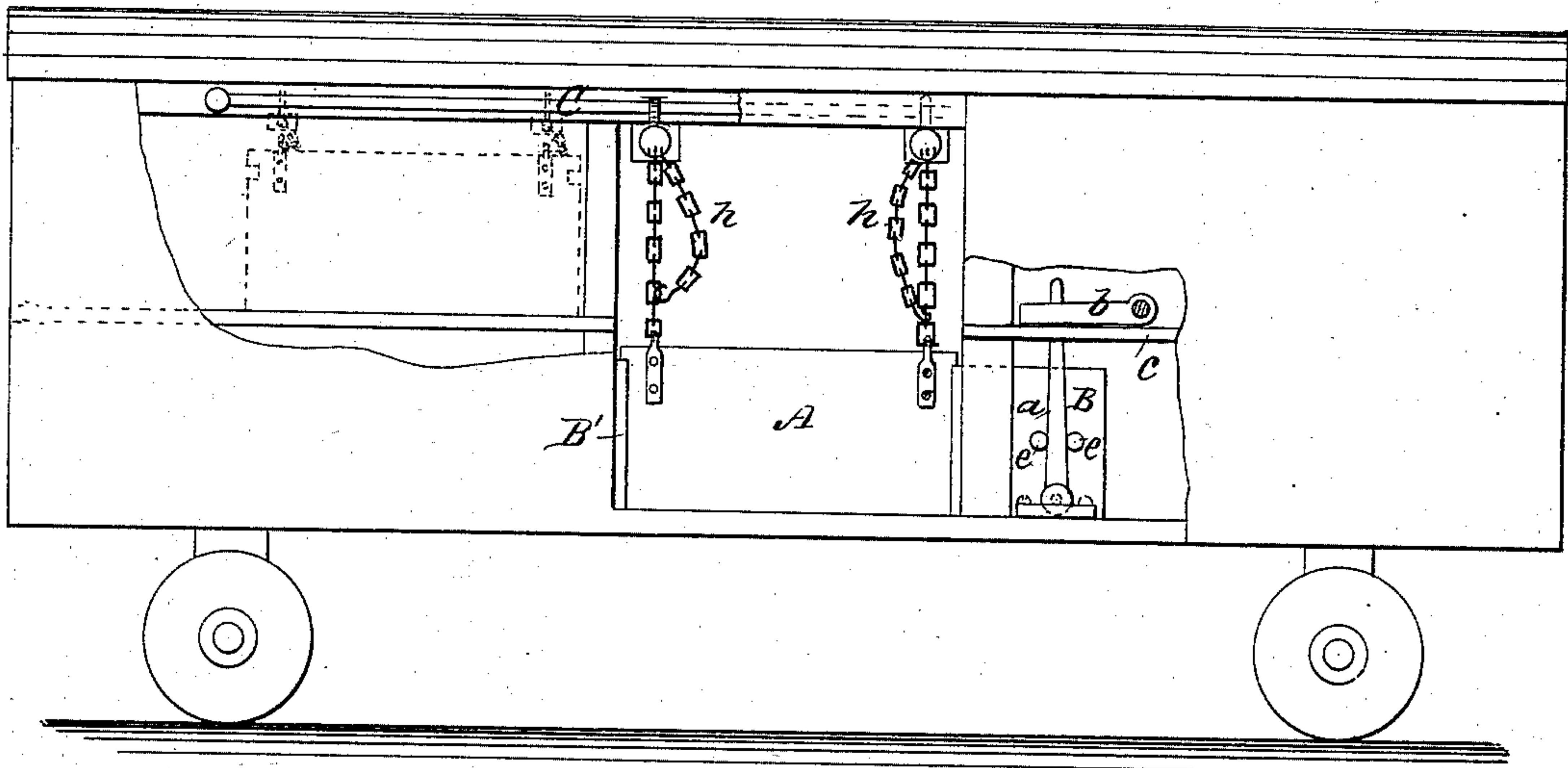
T. McNALLY & W. H. GLASGOW.

FREIGHT CAR DOOR.

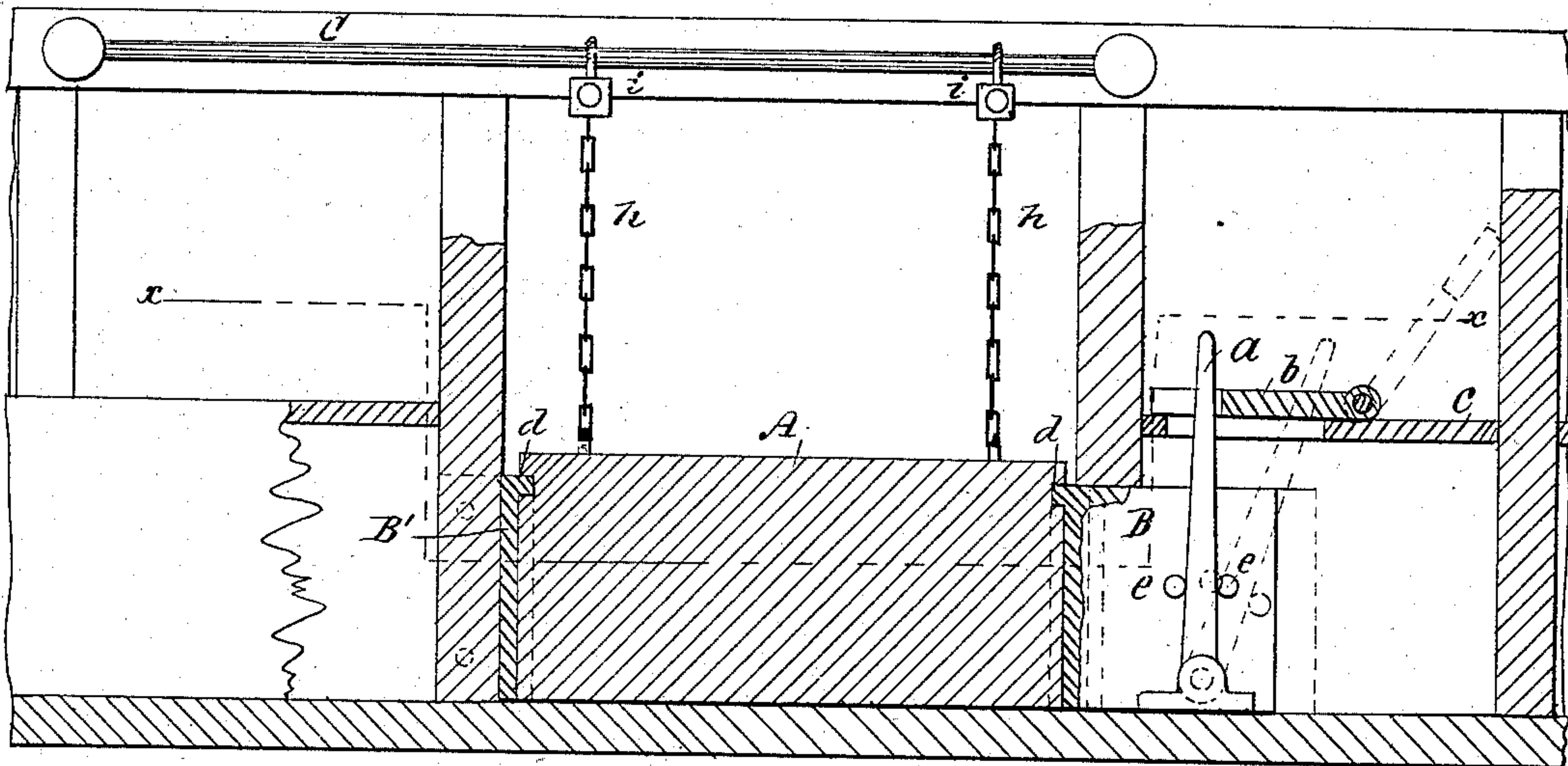
No. 255,648.

Patented Mar. 28, 1882.

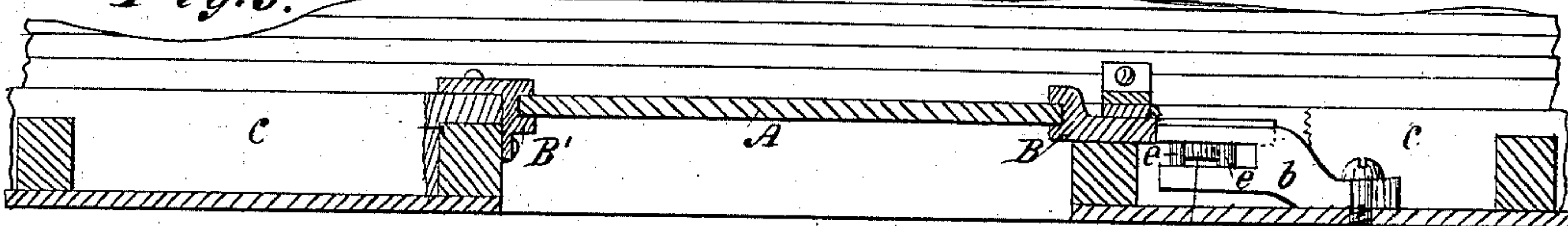
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

THOMAS McNALLY AND WILLIAM H. GLASGOW, OF ST. LOUIS, MISSOURI.

## FREIGHT-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 255,648, dated March 28, 1882.

Application filed October 11, 1881. (No model.)

*To all whom it may concern:*

Be it known that we, THOMAS McNALLY and WILLIAM H. GLASGOW, of St. Louis, in the State of Missouri, have invented a new and Improved Door for Freight-Cars, of which the following is a full, clear, and exact description.

The object of our invention is to provide a door for railroad-cars which are used both for carrying grain and other merchandise, the door having such construction that it can be easily opened when the car is loaded with grain, and can be moved and held out of the way while the car is being filled with other freight.

Our invention consists principally in making the door shorter than the width of the doorway, and providing a sliding plate operated by a lever or similar means for locking and unlocking the door, the door being adapted to swing bodily outward, when unlocked, from the pressure of grain against it.

The invention further consists of suspending the door from a long rod inside the car by means of ropes or chains and sliding blocks, through which the ropes or chains pass for elevating the door, the blocks being adapted to slide upon the rod for moving the door to one side of the doorway.

The invention also consists in the details of construction and the combination and arrangements of parts, as hereinafter described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a freight-car having our improved door, part of the side of the car being broken away to clearly show the door and plate. Fig. 2 is a similar view, partly in section; and Fig. 3 is a sectional plan taken on the line *x x* of Fig. 2.

In the drawings, A represents the door; B, the sliding plate; and C represents the rod from which the door is suspended by means of the chains *h h*, which pass through the blocks *i i*, placed loosely upon the rod. The plate B moves in ways formed in the side of the car, and is operated by the lever *a*, which is hinged to the bottom of the car and passes up between the pins *e e*, fixed in the plate, and through a

slot in the tie-plate *c*, and upon this tie-plate *c* is hinged the locking-bar *b*, which is adapted to lock the lever forward and hold the plate firmly against the end of the door for holding the door securely in the doorway. The front or outer edge of the sliding plate B is formed with a groove in which one end of the door fits, and the opposite casing of the doorway is provided with the fixed plate B', which is also formed with a groove in its front edge for receiving and holding in like manner the other end of the door.

To hold the door against vertical movement when it is locked between the plates, the plates are formed with the lips *d d* at the upper ends of the grooves, which lips fit in corresponding notches in the ends of the door, as shown in Fig. 2.

In use, if the car is loaded with grain, to open the door it is only necessary to raise the locking-plate *b* and throw the lever *a* back, thus disengaging the plate B from the door, and leaving it free to be forced bodily out of the doorway of the car, which will be done by the weight of the grain inside, thus obviating the task of lifting or sliding the door with the weight of grain against it, as is now the practice.

When the door is to be put out of the way while the car is being loaded with other freight besides grain the door is first to be elevated by drawing the chains through the blocks *i i*, and the blocks are then to be moved along upon the rod C, so that the door may be placed upon the tie-plate *c*, as shown in dotted lines in Fig. 1; or it may be let down upon the floor of the car, or placed in any other position at one side of the doorway.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination, with the door A and the rod C, of the chains *h* and the sliding blocks *i*, substantially as shown and described, whereby the door is adapted to be elevated and removed out of the doorway, as set forth.
2. The combination, with the door A, of the laterally-sliding cleat B and the lever *a*, hinged to the bottom of the car and engaging with

the said cleat, substantially as and for the purpose set forth.

3. The combination, with the door A, of the laterally-sliding cleat B, provided with the  
5 pins *e* and the lever *a*, substantially as and for the purpose set forth.

4. The combination, with the sliding cleat B

and the lever *a*, of the hinged locking-plate *b*, substantially as and for the purpose set forth.

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