

(No Model.)

W. L. RANSOME.
CAR DOOR.

No. 521,296.

Patented June 12, 1894.

Fig. 1.

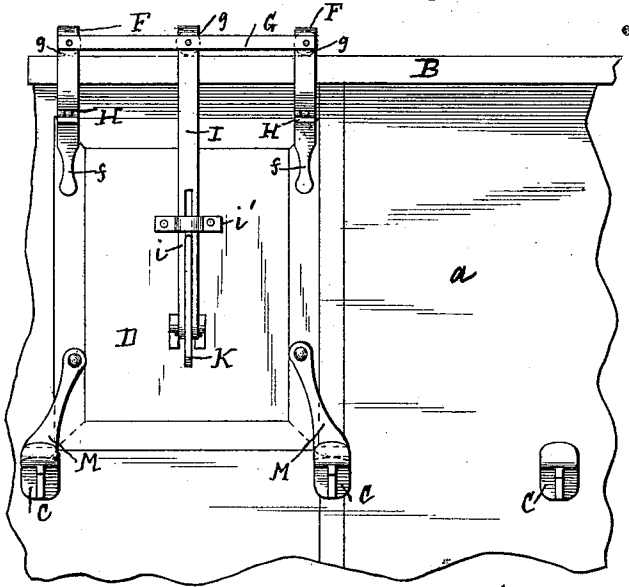


Fig. 3.

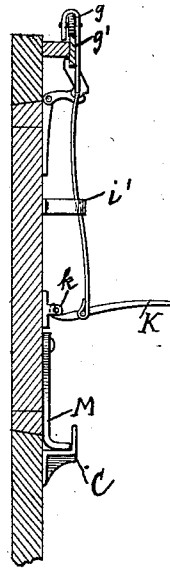


Fig. 2.

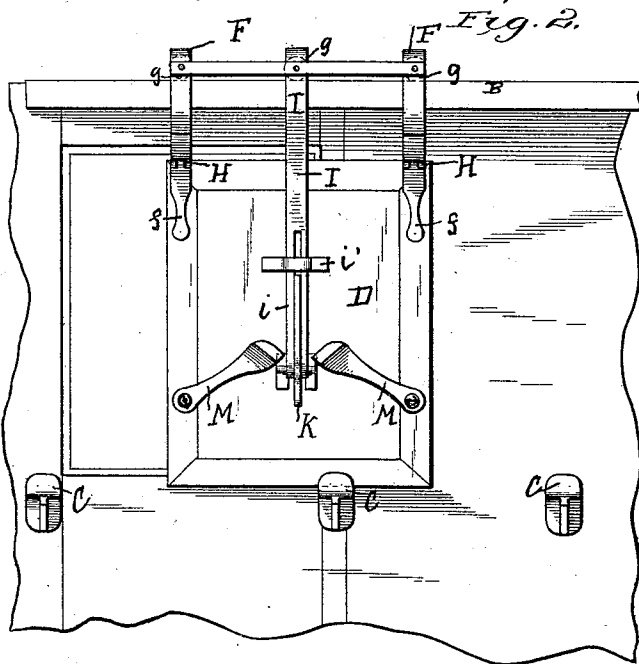
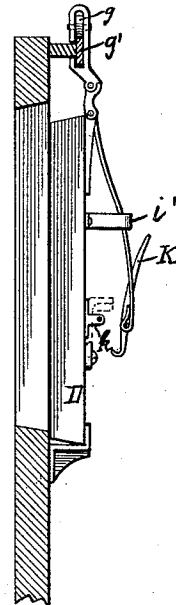


Fig. 4.



witnesses:

Harry J. Rohrer.
J. Mansbury

Inventor:
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Attys

UNITED STATES PATENT OFFICE.

WILLIE LEEK RANSOME, OF ROANOKE, VIRGINIA.

CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 521,296, dated June 12, 1894.

Application filed March 31, 1893. Serial No. 468,478. (No model.)

To all whom it may concern:

Be it known that I, WILLIE LEEK RANSOME, a citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented certain new and useful Improvements in Car-Doors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention has for its object to provide an improved car door, designed particularly for use on freight cars where it is desired to completely close the door opening and at the same time employ a laterally moving or sliding door to prevent all danger of the same being struck by passing trains.

The invention consists in certain novel details of construction and combinations and arrangements of parts all as will be now described and pointed out particularly in the appended claim.

Referring to the accompanying drawings:—Figure 1, is an elevation of a car door constructed in accordance with this invention, closed. Fig. 2 is a similar view with the door partially open. Fig. 3, is a vertical section with the door closed and Fig. 4, is a similar view with the door open; both these last mentioned views showing the operating and locking mechanism.

Similar letters of reference in the various figures indicate the same parts.

The letter *a* indicates the side of a car of any usual or preferred pattern, having at the top a track or way B such as is ordinarily employed for sliding or laterally movable doors of this class and at the bottom, a series of guides C consisting of brackets set at intervals along the lower portion of the body of the car in the direction that the door moves for holding the bottom of the door close in to the side of the car when being moved along the track, and in the present instance also serving as a means whereby the door may be held within the door opening as will presently appear by reason of recesses creating a wedge-like action upon the locking arms, the sta-

bility of the joinder being increased by the jar and motion of the car.

The door itself D and the opening into which it is adapted to fit so as to lie flush with the side of the car when closed, are preferably beveled along the edges, thus while the door will enter easily it will completely fill the opening when seated effectually closing all the cracks.

At the top of the door the lower ends *f* of two or more hangers are secured the upper ends *F* of such hangers being connected by a frame or cross piece *G* and each is formed into a housing for an antifriction wheel *g* adapted to ride on the track B. Projections *g' g'* integrally constructed with the track B serve as flanges for the wheels *g g* to run upon. The connection between this hanger frame, (as I shall term the connected upper portions of the hangers,) and the ends *f* are formed by intermediate link sections *H* hinged respectively to said hanger frame and ends *f*, preferably by elbow hinges which will permit the door to be raised or lowered when swung out of the opening radially. In the latter position the intermediate link sections turn down substantially straight and the elbow hinges prevent the door from swinging outward.

An intermediate hanger *I* is attached to the hanger frame and is provided with a downward extension *i* to the lower end of which a lever *K* is pivotally connected and adapted to co-operate with a pin or projection *k* on the car door, preferably at a point somewhat below the center. The extension *i* is guided by a yoke *i'* and in operation, it will be at once seen, the person closing or opening the door hooks the inner end of the lever beneath the projection *k* and by pressing down on the outer end of the lever *K* raises the entire door and the upper end being guided by the intermediate link connections moves into the door opening then by an inward pressure the bottom of the door follows, as a matter of course.

To open the door, the bottom of the door is pulled out instead of being pushed in and when out, the lever is employed to lower it until its entire weight is supported by the hangers and its lower edge guided by the guides C.

The two bracket guides C nearest the bottom of the opening are utilized to hold the

door closed by means of locking arms or members M pivoted to the outer face of the door at the lower corners and adapted to swing down into the guides as shown clearly in Figs. 1 and 3, so that the door always rests on two guide-brackets. These locking arms have projections in or on their ends which are of approximately the thickness of the lower edge of the door and thus by filling the bracket guides C effectually hold the bottom of the door in. The arms M drop and are held in place by gravity, in the recesses of the guide brackets C, so that the motion and jar of the car increase the wedge-like joinder between them.

I am aware of the patents heretofore granted respectively on the 10th day of September, 1889, to McIntyre numbered 410,766; and on the 16th day of September, 1890, to Ritter, numbered 436,505, and disclaim each and both of said patents as anticipatory of my invention.

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

In car doors the body *a* provided with the bracket guides C, having recesses therein and located on the lower portion of said body, in the direction that the door moves; and the track B having flanges *g'*, in combination with the door D having hangers F, I connected by cross piece G, and provided with wheels *g* adapted to run on said track; the hinges H, whereby said door may be angularly inclined to its normal plane; the lever K fulcrumed at *k* insuring the inclination of said door by direct pulling force; the extension *z*, and yoke *z'*; and the pivoted locking arms M located near each lower corner of the door and adapted to engage the recesses in the guide brackets C before reaching a perpendicular position, whereby a wedge-like joinder between them is created, for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIE LEEK RANSOME.

Witnesses:

M. T. MOOMOW,

G. A. WINGFIELD, Jr.