(No Model.)

R. CURTIS.

CAR DOOR ATTACHMENT.

No. 301,687. Patented July 8, 1884.

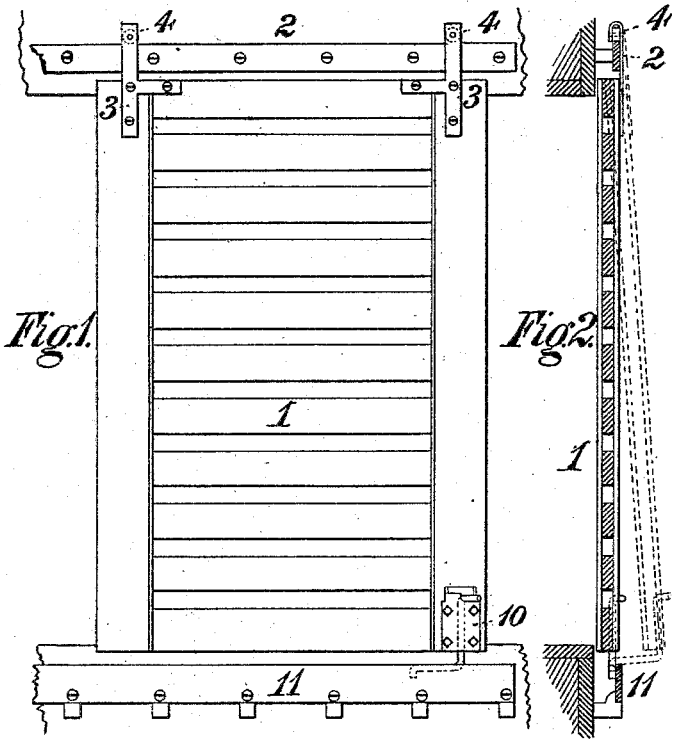

Fig. 1.

Fig. 2.

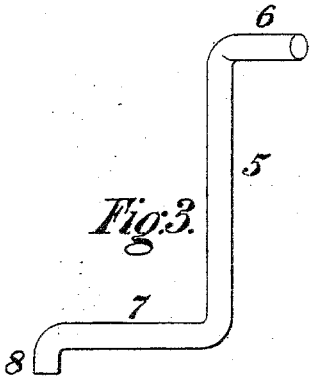

Fig. 3.

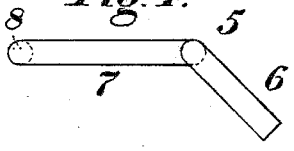

Fig. 4.

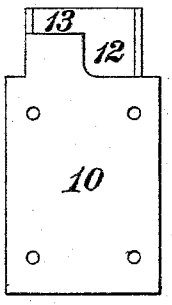

Fig. 5.

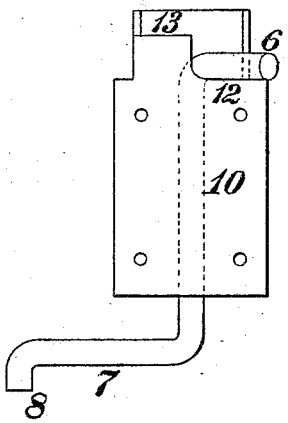

Fig. 7.

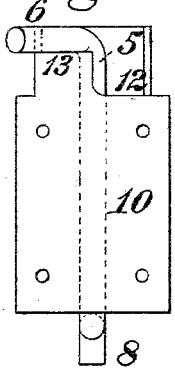

Fig. 8.

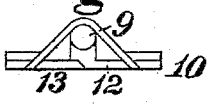

Fig. 6.

WITNESSES:

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ROBERT CURTIS, OF COLUMBUS, OHIO.

CAR-DOOR ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 301,687, dated July 8, 1884.

Application filed April 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, ROBERT CURTIS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented or discovered a certain new and useful Improvement in Car-Door Attachments, of which improvement the following is a specification.

In the accompanying drawings, which make part of this specification, Figure 1 is a view in elevation of a stock-car door with my improvement applied; Fig. 2, a vertical transverse section through the same; Fig. 3, a side view in elevation and on an enlarged scale of the bolt detached; Fig. 4, an end view of the same; Figs. 5 and 6, front and top views, respectively, of the bolt-case with the bolt removed; Fig. 7, a front view of the same with the bolt in position for retaining the door against the side of the car, and Fig. 8 a similar view showing the bolt in the position occupied when the door is swung outwardly.

My invention relates to sliding doors for freight or stock cars; and its object is to enable a door of such description to be either held in position against the side of the car or swung outwardly at bottom for a determined distance therefrom, as may be desired.

The improvements claimed are hereinafter fully set forth.

In the practice of my invention the sliding door 1 of the car is suspended from a horizontal rail, 2, on the side of the car by hangers 3, which are secured to its top, and are provided with rollers 4, rotating on the upper side of the rail 2. In some instances, specially in the case of stock-cars, in order to admit of clearing away manure, ice, &c., which may have accumulated about the bottom of a sliding door, and which tends to impede or prevent its proper movement, it is desirable that the door should have the capacity of being swung or tilted outwardly without being subject, when closed, to accidental displacement from its normal position. I effect such outward movement and retain the door in vertical position, as respectively required, by the following means: An L-shaped swinging or tilting bolt having a vertical body portion, 5, a horizontal lifting-arm, 6, projecting at right angles from the upper end of the body, a swinging arm, 7, similarly projecting from its lower end, and a stop, 8 on the outer end of the swinging arm, is mounted in a vertical bearing, 9, on a bolt-case, 10, secured to the door 1 adjacent to its lower edge, the swinging arm 7 and its stop 8 projecting below the door and bolt-case, between the side of the car and a horizontal guard-rail, 11, secured thereto at a short distance therefrom and just below the bottom of the door. A recess or pocket, 12, is formed in the front plate of the bolt-case, in which the lifting-arm 6 rests when the door is in its normal vertical position, and a flange or seat, 13, on the top of the bolt-case, above the pocket 12, and on the opposite side of the axis of the bearing 9, receives the lifting-arm when the tilting bolt is raised and rotated in its bearing to swing outwardly the lower edge of the door.

In the operation of the attachment the door will be held in vertical position by placing the bolt as shown in Fig. 7, the lifting-arm 6 resting in the pocket 12, and the swinging arm 7 and stop 8 bearing against the inner side of the guard 11. By raising the lifting-arm sufficiently to clear the flange 13, the swinging arm 7 will be raised clear of the guard, and by turning the lifting-arm to the left over the top of the flange 13 the door will be swung outwardly at bottom for a distance equal to the length of the swinging arm 7, the stop 8, which bears against the guard, acting as a fulcrum in the outward movement of the door, and as an end stop to limit the degree thereof. The door is returned to and maintained in vertical position by reverse movements of the bolt.

The door hangers and rollers shown in the drawings are of a construction involving improvements devised by me; but as the same do not constitute part of my present invention, and will form the subject-matter of a separate application, they need not be herein at length described.

I claim herein as my invention—

1. In a car-door attachment, the combination of an L-shaped bolt having a lifting-handle on one end of its body and a swinging arm and stop on the opposite end, a bolt-case adapted to be secured to a car-door and provided with a bearing for the body of the bolt, and a guard-rail secured to the side of a car a

short distance therefrom and just below edge of the door, the inner face of said guard-rail serving as an abutment to the stop on the swinging arm of the bolt, substantially as set forth.

2. The combination of an L-shaped bolt having a lifting-handle on one end and a swinging arm and stop on the opposite end, a supporting box or case having a pocket or recess adapted to receive the lifting-arm on one side of the bolt-bearing, and a flange or seat above said pocket and on the opposite side of the bearing, and a lower guard-rail, substantially as set forth.

In testimony whereof I have hereunto set my hand.

ROBERT CURTIS.

Witnesses:
THOMAS NEWELL,
JAMES E. HULL.