UNITED STATES PATENT OFFICE.

THOMAS F. BARTON, OF CHICAGO, ILLINOIS.

OUTSIDE FLUSH DOOR FOR BOX-CARS.

1,087,346.


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To all whom it may concern:

Be it known that I, THOMAS F. BARTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Outside Flush Doors for Box-Cars, of which the following is a specification.

The object of this invention is to provide a box car with a flush closing door of simple and inexpensive construction, comprising but few parts which can be readily assembled, and adapted to be easily closed and opened.

In the accompanying drawings illustrating one embodiment of the invention, Figure 1 is an elevation of a portion of a box car showing my improved door closed. Fig. 2 is an enlarged detail sectional view on the line 2—2 of Fig. 1. Fig. 3 is an enlarged detail view of a dog bearing bracket. Figs. 4 and 5 are vertical sectional views showing the car door in open and closed positions, respectively. Fig. 6 is a detail rear view of one of the hangers. Fig. 7 is a transverse sectional view showing the construction of one of the door posts.

The door 8 is constructed to fit snugly in an opening 9 in the side of car 10 and its lower edge 8' may be beveled to fit against the bevel edge 10' of the floor of the car at the bottom of the opening 9. Hangers 11 are provided with rollers 12 which travel on a track 13 suitably supported on the car above the opening 9 and secured within a hood 14. Each hanger is provided, below the track, with an angular part 15 having a slot 16 inclined upwardly from the front of said angular part to the rear thereof and extending transversely therethrough, and also another slot 17 (Fig. 6) in the rear face of said angular part which intersects the slot 16. A plate 18 is fastened on the front of the door, at the top thereof, and this plate has a T-head 19 and a contracted neck 20. The head of the plate 18 is engaged with the slot 16 and on both sides of the slot 17. When the door is open the heads of the two plates 18 will rest in the lower ends of the slots 16 (Fig. 4) and in closing the door the heads will slide upward in these slots and guide the door into closed position (Fig. 5).

The hanger and plate provide a two-part means of simple construction and adapted to be readily assembled for suspending the door from the track. In assembling these parts the hanger is arranged on the track and the T-head of the plate 18 is turned so that it can be inserted through the slot 17 and is then turned to rest in the slot 16 of the hanger, as shown in Fig. 4, after which the plate is bolted or otherwise fastened to the door. While the parts can be readily assembled in the simple manner just described, it will be observed that the hanger and plate can not be disengaged without first unfastening the plate from the door and thus the parts are secured together in a simple and secure manner.

A cross bar 21 is secured on the door by brackets 22 and held against lateral movement by collars or shoulders 23 thereon which engage the brackets. A handle lever 24 is made rigid with this cross bar at or about the middle thereof and it is provided with a staple 25 and carries a hook 26 to engage a staple 27 on the door which projects through slot 25 when the handle lever is thrown to closed position (Fig. 5). A dog 28 is rigidly mounted at each end of the cross bar and projects at right angles to the cross bar. Each dog is arranged to enter a socket 29 in the door posts 30 and over the sockets there is a facing plate 31, the longitudinal axis of the bar 21 being preferably located above the base of the socket opening when the door is in open position. I may provide the dog with a shoulder 28' to engage the facing plate at 31' (Figs. 3, 2). When the handle lever is thrown down the 90 dogs will be carried out of the sockets 29 and the door will move out of the opening 9 into open position (Fig. 4). In closing the door the handle lever is swung upward and the dogs will engage the bearing edges 95 of the facing plates so that the door can be lifted and moved into closed position. In this position the dogs engage both of the door posts and, the lever being locked, the door will be securely held in closed position.

What I claim and desire to secure by Letters Patent is:

The combination of a car door, a track on the car, and two part means for suspending the door from the track, said means comprising a hanger to travel on the track and having an angular part beneath the track, said angular part of the hanger having a...
transverse slot extending upward and inward from the bottom to the top thereof and a slot in its underside which intersects said transverse slot, a plate having a constricted neck and a T-head, said head being adapted to be inserted through said intersecting slot into said transverse slot to work therein, and means for fastening the plate to the door below the hanger.

THOMAS F. BARTON.

Witnesses:

Wm. F. Belt,

M. A. Kiddie.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."