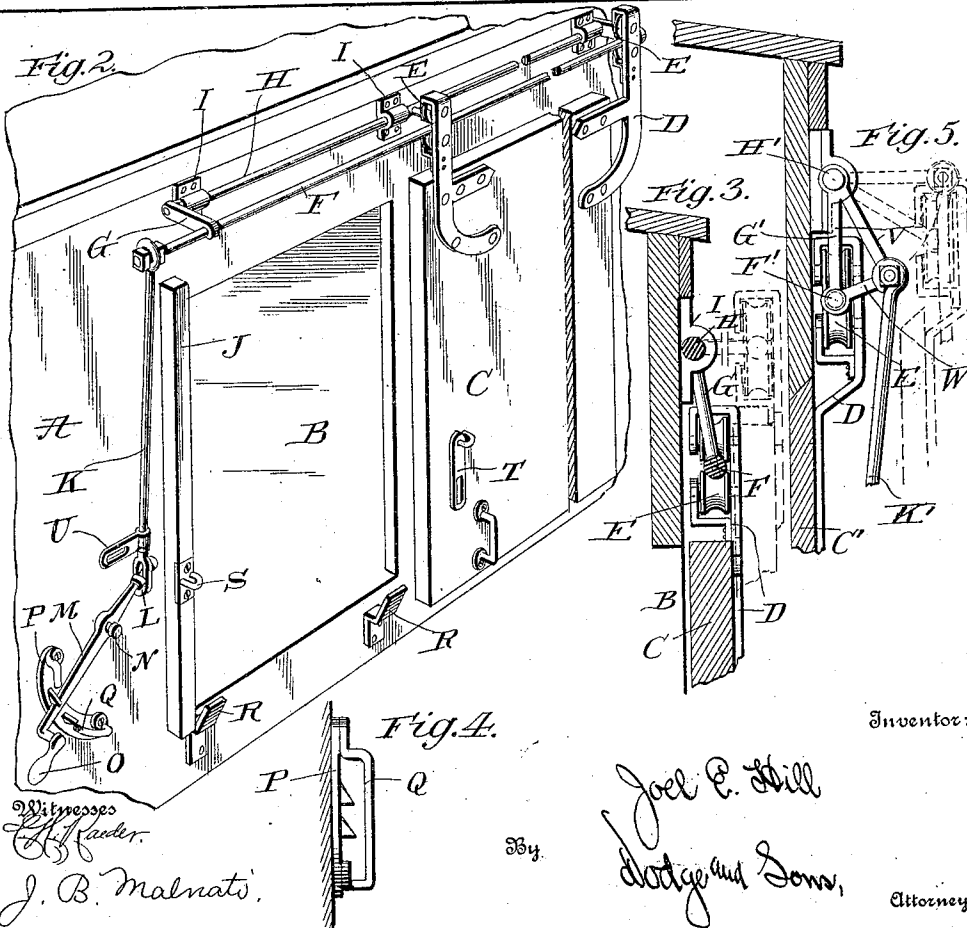
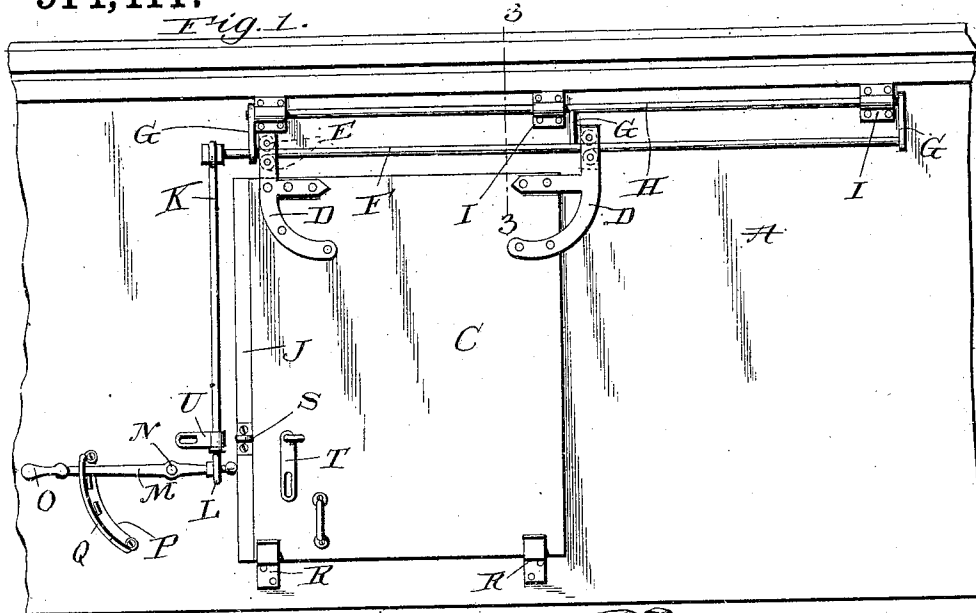


J. E. HILL.  
CAR DOOR HANGER.  
APPLICATION FILED JAN. 17, 1906.

914,411.

Patented Mar. 9, 1909.



# UNITED STATES PATENT OFFICE.

JOEL E. HILL, OF LEXINGTON, NORTH CAROLINA.

## CAR-DOOR HANGER.

No. 914,411.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed January 17, 1906. Serial No. 296,556.

*To all whom it may concern:*

Be it known that I, JOEL E. HILL, a citizen of the United States, residing at Lexington, in the county of Davidson and State of North Carolina, have invented certain new and useful Improvements in Car-Door Hangers, of which the following is a specification.

My invention pertains to improvements in car-door hangers, the construction and advantages of which will be hereinafter set forth, reference being had to the annexed drawings, wherein:

Figure 1 is a side elevation of a portion of a car or similar structure and a door, the latter being shown in its closed position; Fig. 2 a perspective view thereof, the door being shown open; Fig. 3 an enlarged detail vertical sectional view taken on the line 3—3 of Fig. 1; Fig. 4 a detail view of the holding member or rack employed in connection with the actuating member; and Fig. 5 a vertical sectional view showing a modification of the structure.

The object of my invention is to provide a simple and efficient mechanism for supporting a car-door so that it may be readily opened, notwithstanding the fact that the freight or contents of the car may be pressing against the inner side of the door and thereby tending to bind the same against the guards or holders which normally retain the door in its closed position.

Referring to Figs. 1 to 4 inclusive, A designates the main body of the car, B the usual opening or door-way, and C the door, having at its upper end two hangers or supports D, each of which is provided with a pair of grooved rollers E that embrace a rod F. Said rod is carried by a series of arms G, the inner ends of which are rigidly connected to a rock-shaft H, journaled in suitable bearings I secured to the side of the car. While I have shown three arms G connecting the rock-shaft and rod, it is evident that any number of such arms may be employed in order to insure the necessary support for the rod. Rod F at one end is extended beyond the door-opening and the vertically-disposed abutment member or door-stop J, and pivotally connected to said extended end is a pitman K provided at its lower end with an elongated eye L. One end of an actuating lever M, fulcrumed at N, extends through said eye and makes a loose connection therewith, the opposite end of the lever being provided with

a handle O. A segmental locking rack P stands in line with the free end of lever M and a guard Q overlies the lever and rack, said guard serving to prevent undue displacement of the lever when it is moved out of engagement with one or the other of the locking teeth of the rack. Secured to the car at a point below the opening B are the usual door-retaining members or holding devices R which, when the door is in its closed position, as shown in Fig. 1, embrace the lower end thereof and prevent it from swinging outwardly. The door-stop or abutment J is provided with a staple S, a hasp T being secured to the car-door. The rod or pitman K is likewise provided with a hasp, U. When the door is closed and the pitman K lowered the hasps T and U may be brought over the staple S and secured by a single lock. This will maintain the door in its closed position, preventing the lever M from being operated thereby elevating rod or pitman K, and consequently the door cannot be raised off of the holding or retaining members R. The rod F, together with the arms G and rock-shaft H, may be termed a rocking-frame. When said frame is thrown upwardly (into the position shown in Fig. 2) by the depression of lever M, it will elevate the door to a slight extent and throw the same outwardly away from the face of the car, or into the position indicated by dotted lines in Fig. 3. The door may then be traversed along the rod or rail F, away from the opening B. In case the door should be jammed by freight bearing against the same, the lever may be drawn down and held by the second lug or tooth of the rack P, in which event the door will be thrown entirely clear of the holding devices R and may then be swung outwardly by hand as desired, so as to entirely withdraw it from contact with the contents of the car.

In Fig. 5 a modification of the invention is shown, in which the door, designated by C', passes into the opening formed in the side of car or similar structure. In this case, instead of connecting the actuating pitman or rod K' directly to the end of the rod F', it is swiveled or pivoted to the outer ends of a pair of arms V and W connected, respectively, to the rock-shaft H' and rod F', or to the intermediate arm G' which connects said members. By throwing the pivotal point of the pitman or rod K' outwardly away from the shaft H', the parts will not be upon a dead

center, and the rod F' may be brought outwardly and upwardly, as shown in dotted lines.

Having thus described my invention, what I claim is:

1. In combination with a car or like structure provided with an opening; a frame journaled thereon; a door; a pair of hangers carried by said door; rollers secured to the hangers and embracing the outer member of the frame; a pitman pivotally connected to said outer member; an actuating lever fulcrumed upon the car and likewise connected to the lower end of the pitman; a stationary fastening device secured to the car; means carried by the door coöperating with said device to hold the door closed; and means carried directly by the pitman, likewise coöperating with said fastening device when the door is closed for holding the pitman against movement.

2. In combination with a car or like structure provided with an opening; a door-stop or abutment located to one side of the opening; a frame pivotally connected to the car at a point above the opening; a door; a pair of hangers secured to the door; a pair of rollers carried by each of said hangers and embracing the outer member of the frame; a pitman pivotally connected to the outer member of said frame and extending downwardly therefrom; means for actuating said

pitman; a staple secured to the door-stop; a hasp mounted upon the door; and a second hasp carried by the pitman, both of said hasps being adapted and designed to pass over the staple, substantially as and for the purpose described.

3. In combination with a car or like structure provided with an opening; a frame pivotally connected thereto at a point above the opening; a door; a pair of hangers secured to the door; a pair of rollers carried by each of said hangers and embracing the outer member of the frame; a pitman pivotally connected to the outer member of said frame and extending downwardly therefrom; a lever fulcrumed upon the car and likewise connected to the lower end of said pitman; a rack for holding said lever in its various adjusted positions; a door-stop; a staple secured to said stop; a hasp carried by the pitman; and a second hasp mounted upon the door, said hasps, when the door is closed and the pitman lowered, being adapted to be passed over the staple, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOEL E. HILL.

Witnesses:

D. J. HILL,  
S. E. WILLIAMS.