

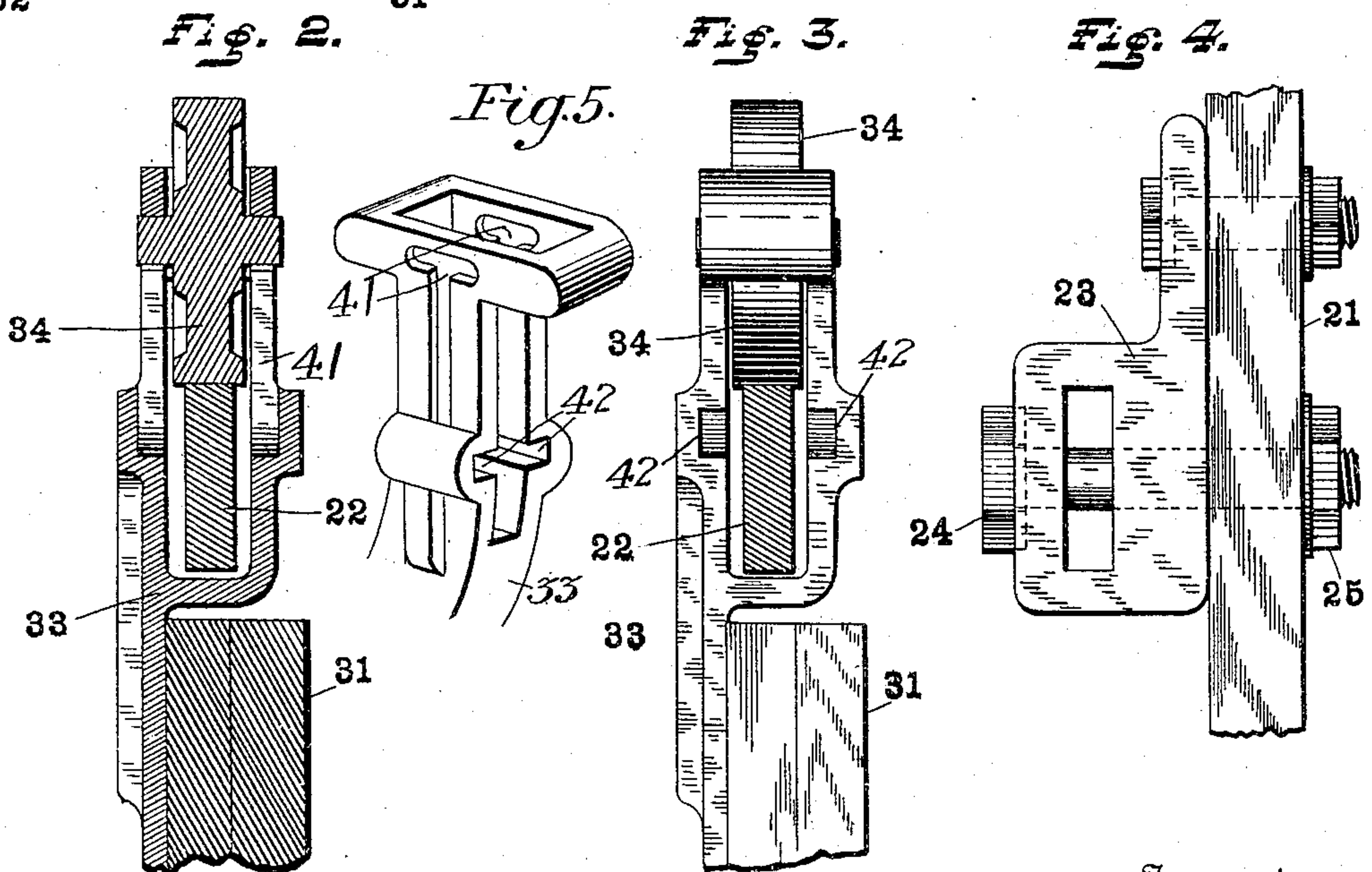
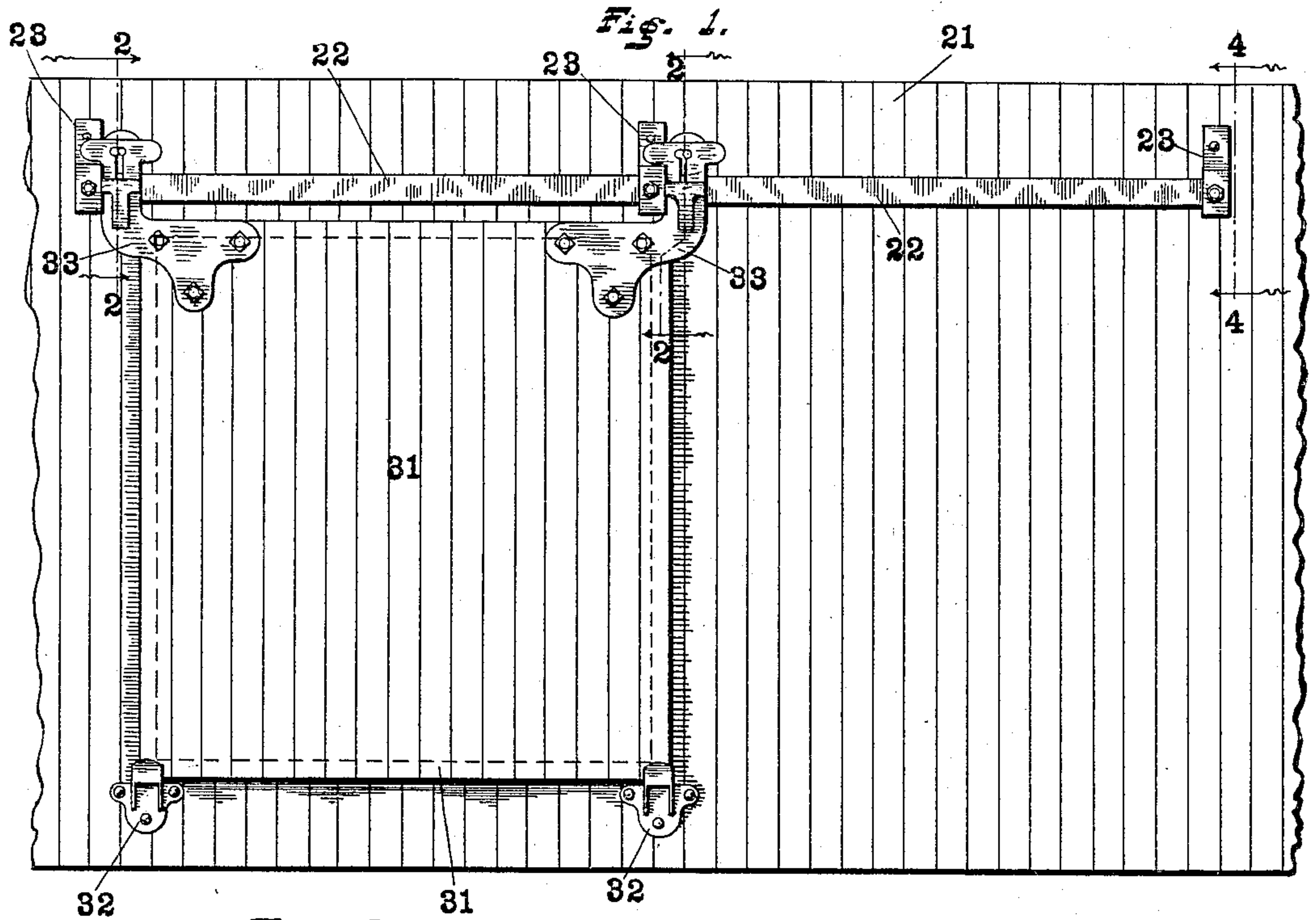
No. 792,142.

PATENTED JUNE 13, 1905.

G. L. & E. D. LUCAS.

CAR DOOR HANGER.

APPLICATION FILED JULY 27, 1904.



Witnesses

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# UNITED STATES PATENT OFFICE.

GEORGE L. LUCAS AND ERASMUS D. LUCAS, OF INDIANAPOLIS, INDIANA.

## CAR-DOOR HANGER.

SPECIFICATION forming part of Letters Patent No. 792,142, dated June 13, 1905.

Application filed July 27, 1904. Serial No. 218,336.

*To all whom it may concern:*

Be it known that we, GEORGE L. LUCAS and ERASMUS D. LUCAS, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Car-Door Hangers, of which the following is a specification.

The object of our invention is to produce a simple, strong, efficient, and easily-operating suspending apparatus for car-doors, as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of that portion of an ordinary box-car which includes one of the doors, its track, and immediately adjacent parts; Fig. 2, a central vertical sectional view through one of the hangers at the point indicated by the dotted line 2 2 in Fig. 1; Fig. 3, an elevation of such a hanger and fragments of the immediately adjacent parts; Fig. 4, a detail elevation of the track-hanger separately, and Fig. 5 a perspective detail of the upper end of one of the hanger-plates 33.

Upon the side 21 of an ordinary car is secured a track-rail 22, of bar-iron, which is supported at the ends and also preferably in the middle by track-hangers 23. These track-hangers, as shown in Fig. 4, are arranged to carry the track-rail entirely free from the side of the car. Said track-rail is arranged to pass through and fit closely within a horizontal mortise-like perforation in said hanger. In line with said perforation the hanger is recessed, as indicated by the dotted lines in Fig. 4, and within this recess the head of the bolt 24 (by which the track-rail is held into the hanger) fits, and is thus prevented from turning while the nut 25 is upon the inside, as shown. There is, therefore, no chance of the nuts loosening and permitting the bolts to come out of place after the hangers are secured in position on the side of the car, so that the track-rails are held thereby in absolute security.

The car-door 31 is held and guided at the bottom by the ordinary brackets 32, secured to the sides of the car. The hanger-frames 33 are rigidly bolted to the upper corners of the door and extend upwardly to above the upper surface of the track-rail 22, where they develop into housings which contain the wheels or rollers 34. When the parts are assembled, the track-rails pass through the lower portions of these housings immediately below the rollers, and thus prevent the rollers from being removed so long as the parts are assembled. In other words, the rollers are to be inserted in the housings before the housings are placed upon the track in the operation of hanging the door. These rollers and their axles are preferably made integral, as best shown in Fig. 2, the axle ends or gudgeons extending out and resting in bearings in the housings. These housings or hanger-frames are of a peculiar construction. The bearings in which the axles of the rollers rest in operation are at the extreme upper end of slots 41, which extend thence downwardly for a distance, and from the lower end of these slots grooves 42 extend outwardly to the outer side of the hanger. The rollers (including their axles) are thus capable of being inserted within the housings or hanger-frames by being slipped into the openings therein, the axle ends entering and traveling horizontally in said grooves until the vertical slots are reached, when they will pass up said slots to the point where they finally rest. At this upper or final resting-point these slots are enlarged somewhat laterally, so as to form bearings upon which the roller-axes will roll in operation. The sides of the hanger-frame or housing are swelled out at the points where these grooves are formed, as best shown in Figs. 2 and 3, in order to provide for forming said grooves without weakening said frames or housings.

By means of this construction we are enabled to produce a car-door hanger of such a character that the roller cannot escape or become detached by reason of the loosening of any bolts or axle-pins, as the roller-axes are



formed rigidly or integral with the rollers themselves, while said rollers can be easily and quickly removed when desired after the door is pulled off the track by moving them  
5 down the slots and out the grooves, as described, which enables them to be easily renewed or repaired in case of breakage, as when a collision or wreck occurs. The track  
10 being a plain rectangular bar and being set out free from the side of the car does not produce any trough or recess to catch dirt or cinders, and therefore no impeding of the operation can be occasioned by such a cause. Said  
15 track-rollers being held by bolts which are thus held from escaping from position by the construction of the hangers and the side of the car are not liable to get loosened or lost or otherwise displaced. The hanger-frame  
20 or roller-housing extending, as it does, entirely around the track-rail there is no possibility of the door being separated therefrom except when the rail-hangers are removed from the car sides. The whole structure, therefore, is not only of a very simple, and  
25 consequently inexpensive character, but is efficient, easily operated, and impossible to get out of order by any means short of substantial destruction.

Having thus fully described our said inven-

tion, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a car-door, of a plain-bar track-rail, hangers containing mortise-like perforations through which said rail passes and arranged to carry said rail free  
35 from the side of the car and provided with bolt-holes for securing the track therein with recesses in the outer face of said hangers for receiving the heads of the bolts and preventing them from turning, and said bolts. 40

2. The combination, with a car and car-door, of a track-rail and rail-hangers, door-hangers secured to the door and running upon the track-rail, said track-hangers embodying  
45 roller-bearings with slots and grooves extending downwardly and outwardly respectively therefrom, and rollers having axles rigid therewith, adapted to be inserted to position through said grooves and slots.

In witness whereof we have hereunto set our  
50 hands and seals, at Indianapolis, Indiana, this 22d day of July, A. D. 1904.

GEORGE L. LUCAS. [L. S.]  
ERASMUS D. LUCAS. [L. S.]

Witnesses:

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