

P. M. ELLIOTT.
CAR DOOR MECHANISM.
APPLICATION FILED OCT. 11, 1911.

1,024,502.

Patented Apr. 30, 1912.

Fig. 1.

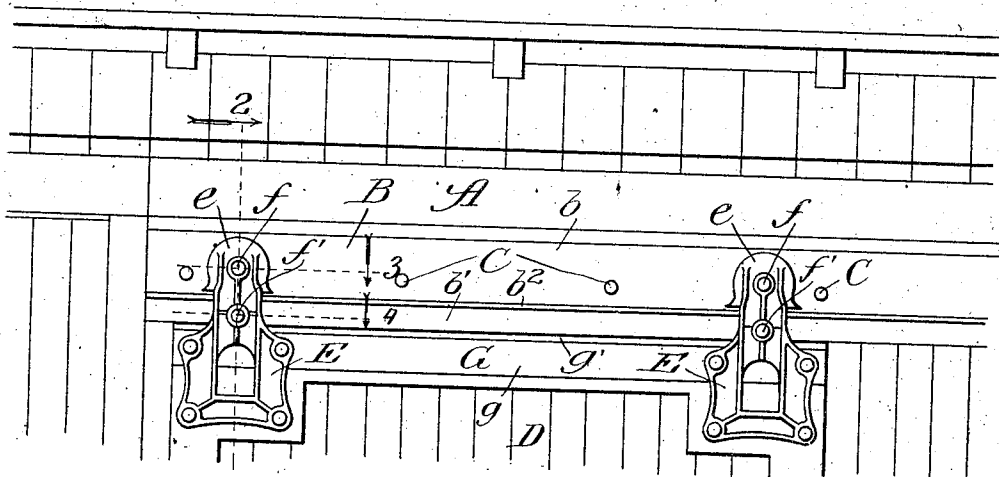


Fig. 2.

Fig. 3.

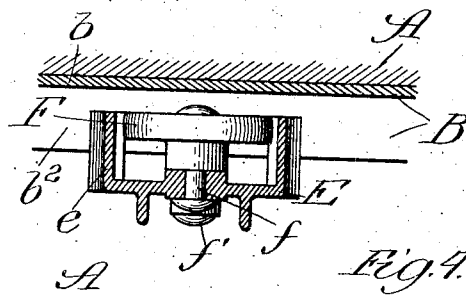
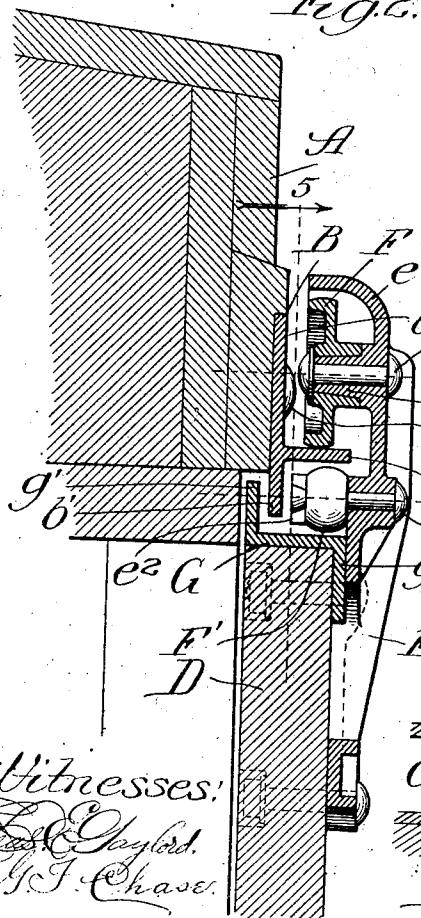
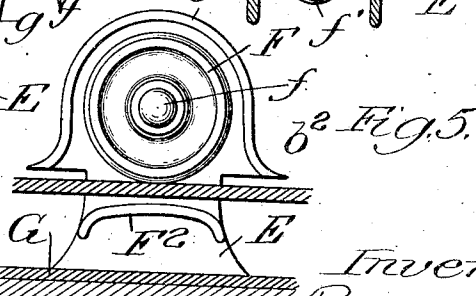
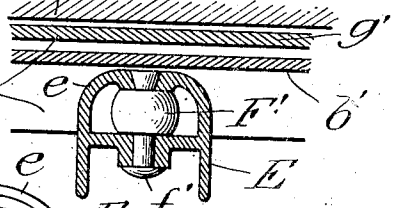


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CAR-DOOR MECHANISM.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PERCY M. ELLIOTT, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Car-Door Mechanism, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification.

My present invention has for its object to provide improved means for sustaining the sliding doors of railway freight cars and the invention consists in the features of novelty hereinafter described, illustrated in the accompanying drawing and particularly pointed out in the claim at the end of this specification.

Figure 1 is a view in side elevation showing part of a railway car having my invention applied thereto. Fig. 2 is a view in vertical cross-section on line 2 of Fig. 1. Figs. 3 and 4 are views in horizontal section on the lines 3 and 4, respectively, of Fig. 2. Fig. 5 is a detail view of a modification with parts in section on the line 5 of Fig. 2.

Above the door-way or door opening in the side wall A of the car is arranged a rail bar B that is connected to the side wall of the car by through-bolts C. The rail B may be described as a T-shaped bar, in that it has a vertically disposed upper base flange b through which the rail is bolted to the car wall, a lower flange or member b' serving as a guard flange and a horizontally outwardly projecting track flange or member b^2 . The upper, vertically disposed flange b is preferably formed of considerable height, so as to enable the through-bolt C to be placed at a distance above the track flange b^2 , and to provide a broad bearing for the rail or track bar against the side of the car, thus much more effectively enabling the rail or track B to sustain the weight of the car door D and its fittings. As shown, the lower depending guard flange b' lies in the plane of the base flange and the track flange b^2 projects outwardly from the lower portion of the base flange.

To the upper portion of the car door D are bolted the suspension brackets E. As shown, each of these brackets has its upper part formed as a hood or casing e to inclose an anti-friction roller F that rests upon the upper face of the track flange b^2 . The

roller is journaled within the casing on an inwardly projecting stud e' of the bracket and is held in place by a bolt or rivet f . Each of the brackets is also provided, at a point below the track flange b^2 with guiding means arranged to engage the under side of said track flange in case the door is raised slightly and thus insure the more accurate movement of the parts as the door is moved back and forth. Preferably, each bracket E is provided with a housing e^2 within which a small roller F' is journaled upon a bolt or rivet f' .

Upon the upper edge of the door is mounted a Z-shaped metal bar G that is connected to the door by through bolts passing through the outer flange g of the bar that depends over the outer face of the door. The inner flange g' of the bar G extends upwardly inside of the guard flange b' of the rail B and thus serves to prevent the accidental disengagement of the door hangers from the track bar. This arrangement also protects the door and the door opening from the weather.

The guide rollers F' are slightly spaced from the under side of the track flange b^2 , but, in shifting the door, it is frequently lifted and the rollers F disengaged from the upper face of the track flange. When this occurs the rollers F' will engage the track flange and properly guide the shift of the door and thus prevent binding. If desired, an inwardly projecting guide shoe F² (see Fig. 5) upon the bracket E may be substituted for the roller F'. Preferably, the casing e is provided with outturned or wedge shaped lower edges for cleaning the upper face of the track flange.

It should be noted that the applicant's improved T-shaped rail which abuts against the side of the car can be securely bolted to the car at points well abutting the track flange which sustains the weight of the door. Furthermore, the arrangement is such that the rail has a very broad bearing against the side of the car which may extend below the track flange. This arrangement is well adapted to resist the torsional strain brought upon the rail and the fastening bolts by the pressure on the outwardly projecting track flange. Furthermore, the arrangement of the guard flange permits the use of guides on the door hangers beneath the track flange which limits the vertical movement of the door and facilitates its lateral shift. At the

same time, the arrangement is such that the door is carried closely adjacent the side of the car.

It is obvious that the precise details of construction above set out may be varied without departing from the scope of the invention.

I claim as my invention:—

The combination with a car body, of a T-shaped rail extending above the door opening of the car body and comprising a vertically disposed base flange abutting against and bolted to the side of the car, a track flange projecting horizontally from the lower portion of said base flange and a guard flange extending downwardly at the rear

of said track flange, a door, hanger brackets secured to said door and having rollers engaging the upper face of said track flange and having inwardly projecting guides arranged to engage the lower face of said track flange, and a bar secured to the upper edge of said door and extending upwardly behind said guard flange to hold said door against displacement and said rollers and guides in position relatively to said track flange, substantially as described.

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