

No. 768,137.

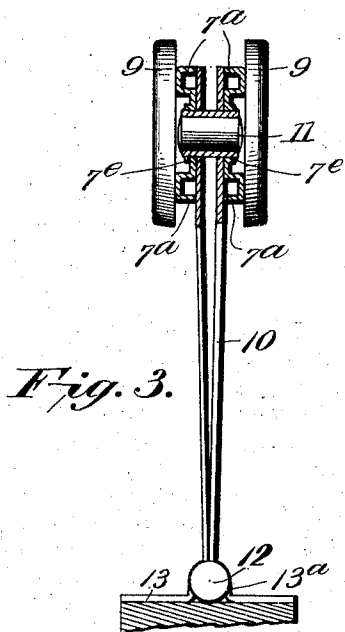
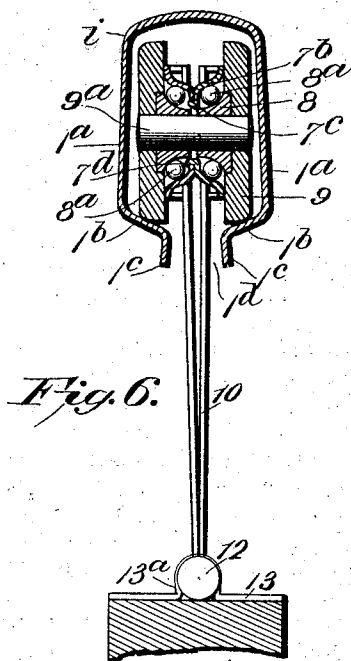
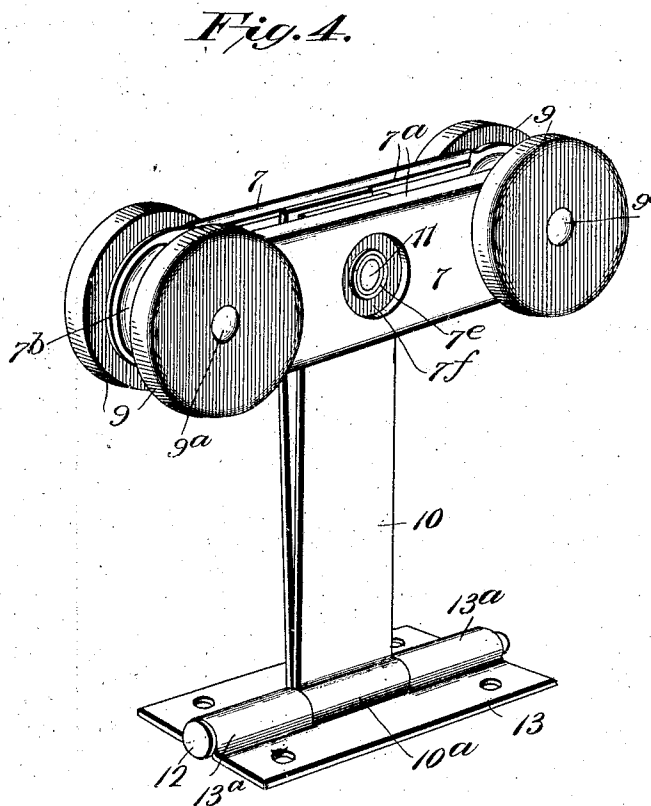
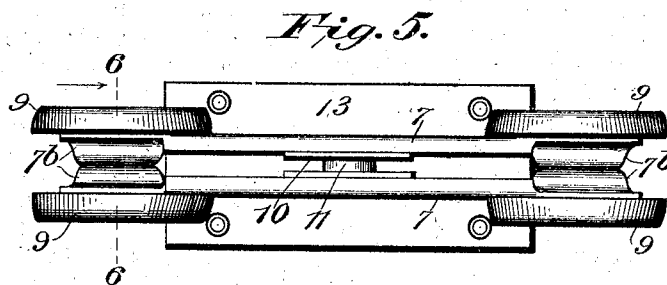
PATENTED AUG. 23, 1904.

J. T. McCABE.
DOOR HANGER.

APPLICATION FILED DEC. 31, 1901.

NO MODEL.

2 SHEETS—SHEET 2.



James T. McCabe Inventor

Witnesses

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UNITED STATES PATENT OFFICE.

JAMES T. McCABE, OF NEW YORK, N. Y.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 768,137, dated August 23, 1904.

Application filed December 31, 1901. Serial No. 87,866. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. McCABE, a citizen of the United States of America, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Door-Hangers, of which the following is a specification.

My invention relates to certain new and useful improvements in means for supporting sliding doors, &c., and while some of the features herein shown are especially applicable for use with doors it will be understood that other features are also of value for use in connection with various devices—such, for instance, as sliding ladders—and I do not, therefore, limit my broader claims to the use of my invention with a door.

My invention has for its object to provide means whereby the supporting-track may be readily mounted within and removed from a pocket in the wall and readily positioned to permit the proper adjustment of the door, to provide a construction of a track and trolley therefor whereby the trolley will be constantly centered on the track, to provide a simple form of trolley running with but little friction, and to provide a simple and efficient device for connecting the door and trolley.

With these objects in view my invention consists in the construction, arrangement, and combination of the several parts of which it is composed, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, in which corresponding parts are designated by corresponding marks of reference, Figure 1 is a fragmental side elevation of a door-hanger constructed in accordance with this invention. Fig. 2 is a perspective detail view of the slotted bracket-plate shown in Fig. 1, the bolt and nut being shown in place. Fig. 3 is a vertical section on line 3 3 of Fig. 1. Fig. 4 is a perspective view of the trolley carriage and pendant. Fig. 5 is a plan view of the trolley. Fig. 6 is a transverse vertical section on the lines 6 6 of Fig. 5, but showing the trolley as mounted in the track.

The track 1 is tubular in cross-section, having flattened sides slightly diverging toward their lower edges, where they are bent in-

wardly and downwardly to form the trolley-ways 1^a and then downwardly and outwardly, forming flared skirts 1^c on each side of an open slot 1^d. This track is suspended over the path of the door by means of plates 2 and 3, attached to a suitable support 4. The plate 2, which is located above the opening A of the door, is of a usual construction—that is to say, it has upon its lower face a central boss 2^a, provided with a threaded aperture adapted to receive the supporting-bolt of the track, as will be hereinafter more fully described.

The plate (or plates) 3 are located in the door-pocket, and each consists of a circular disk having a slot 3^a therein facing toward the door-opening, the metal of the plate being struck up from the lower surface thereof around the slot to form a flange 3^b, adapted to receive the corresponding flange 5^a upon a nut 5, mounted on a bolt 6, projecting upwardly through the track. The bolt 6 is threaded through the top of the track, which is provided with a boss 1^e to receive it, being locked in place by a jam-nut 6^a. In placing the track over the path of the door the nut 5 is properly adjusted on the bolt 6 and the track is slipped into the pocket, the flange 5^a upon the nut 5 being inserted in the slot in the plate 3. A second bolt 6, working through a corresponding boss 1^e in the track, is then threaded into the aperture of the plate 2 and locked by a jam-nut 6^a. To permit the ready manipulation of the bolts 6, they are provided with slotted heads, which can be engaged by a screw-driver inserted in the slot 1^d of the track.

The trolley-carriage consists of two cheeks 7, of stamped sheet metal, placed side by side and each provided at its top and bottom with a strengthening-flange 7^a, formed by bending the edge of the sheets inwardly toward the medial line of the carriage. Each sheet has stamped in each of its ends a ball-bearing recess 7^b, surrounding an aperture 7^c, one of the cheeks having its metal around the said aperture bent into a flange and upset upon the opposite cheek, as at 7^d, whereby the two parts are secured together. Each cheek is also centrally perforated, as at 7^e, and has a depression 7^f, surrounding the said aperture.

A cone 8 is contained in each of the ball-bearing recesses 7^b, balls 8^a being interposed between the cones and recess, and a wheel 9, preferably of compressed or vulcanized fiber, is secured to the outer face of each cone by means of rivets 9^a passing through the aperture 7^c. Each of wheels 9 has its tread-face beveled to conform to the inclination of the ways 1^b of the track upon which it runs. The downward inclination of the said ways and the corresponding bevel on the trolley-wheels cause the trolley to run centrally in the track and with the space between its cheeks above the slot 1^d.

The hanger-pendant 10 consists of a piece of sheet metal bent back upon itself, its two ends being apertured and passing between the cheeks of the trolley, where they are secured by means of a pivot 11, passing through the perforations 7^e in the cheeks, the sides of the pendant working against the flanges 7^a on the cheeks.

The hanger-pendant has a central portion 10^a, bent into the form of a pintle-knuckle, adapted to be seated between the knuckle 13^a on the plate 13, secured to the door and pivotally connected thereto by a pin 12. By this means the door is supported as on a hinge, permitting it to swing from side to side, and at the same time by withdrawing the pintle-pin the door may be readily disconnected from the pendant to permit its removal and the adjustment of the track.

The skirts 1^c of the track not only serve to strengthen the track against bending under the weight of the door, but also serve as guides to limit the sideward movement of the pendant and to thus keep the door in its path.

It will be seen that all parts of my invention are of simple construction (many of the pieces being formed of sheet metal) and capable of being cheaply manufactured, and this I accomplish without loss of strength or durability.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, in a door-hanger, with a slotted plate and a boss-plate secured above the path of the door, the slotted plate being inserted in the door-pocket, of a tubular track, a bolt passing through the tubular track, a flange-nut upon the bolt adapted to engage the slot of the slotted plate, and a bolt passing through the tubular track and adapted to engage the boss-plate, substantially as described.

2. A pocket-plate for a door-hanger, consisting of a disk having an open slot therein, the metal of the plate being struck up from the lower surface thereof, around the slot to form a flange, in combination with a nut con-

tained in the flange of the plate, substantially as described.

3. The combination, in a door-hanger apparatus, of a slotted track, a plate secured above the track, and consisting of a disk having an open slot therein, the metal of the plate being struck up from the lower surface thereof around the slot to form the flange, a flanged nut adapted to engage the slot of the slotted plate, and a bolt passing through the tubular track and adapted to engage the nut, substantially as described.

4. A trolley-carriage, consisting of two cheeks of sheet metal, each cheek having ball-bearing recesses and an aperture centrally disposed with respect to each of the said apertures, at each end thereof, cones contained in said recesses, balls in the recesses and interposed between them and the cones, and disk wheels, upon the edges of the cones, substantially as described.

5. A trolley-carriage, consisting of two cheeks of sheet metal, having ball-bearing recesses and an aperture centrally disposed in respect to each recess at each end thereof, the metal of one of the said cheeks being stamped into a flange and upset upon the opposite cheek through the said apertures, and wheels mounted upon pins passing through the said apertures, substantially as described.

6. In a trolley-carriage, the combination of two cheeks of sheet metal having flanges stamped thereon at the edges thereof and having apertures at their opposite ends, the metal of one of the cheeks being thrown up into a flange and upset upon the opposite cheek around the apertures therein, wheels mounted upon pins passing through the said apertures, and a pendant pivoted between the cheeks, substantially as described.

7. The combination in a trolley-carriage, of two cheeks of sheet metal, having inwardly-projecting flanges at their edges, of wheels mounted in the said cheeks, a sheet-metal pendant bent upon itself, inserted between the said cheeks, and working on the flanges thereof, and a pin securing the cheeks and pendant together, substantially as described.

8. The combination in a door-hanger of two cheeks having wheels mounted therein, of a sheet-metal pendant bent upon itself and pivoted between the cheeks of the hanger, a knuckle-plate adapted to be secured to the door part, and a pintle-pin inserted beneath the knuckle-plate, and through the bend of the pendant, substantially as described.

Signed by me in New York city, New York.

JAMES T. McCABE.

Witnesses:

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W. L. HAYWARD.