

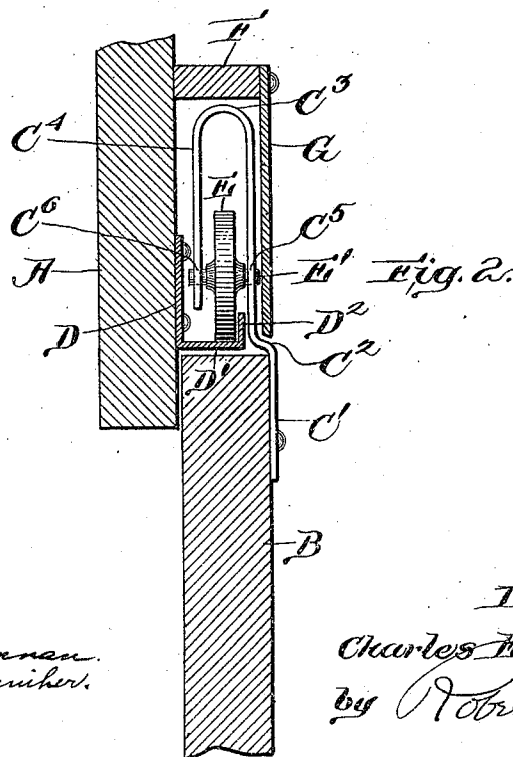
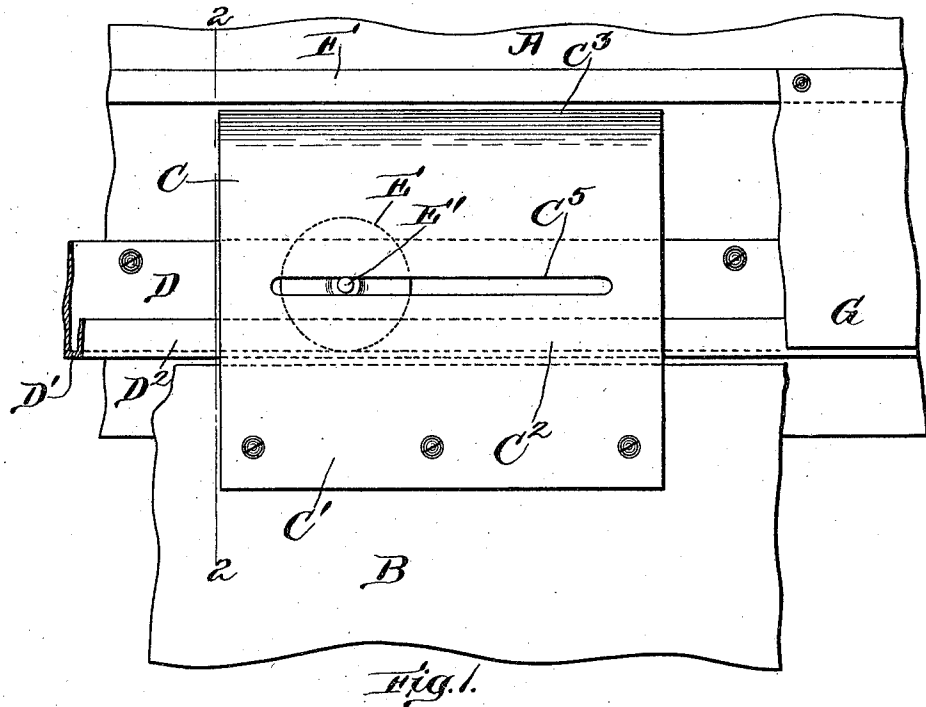
C. E. FRYE.

DOOR HANGER.

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949,067.

Patented Feb. 15, 1910.



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UNITED STATES PATENT OFFICE.

CHARLES E. FRYE, OF LACONIA, NEW HAMPSHIRE.

DOOR-HANGER.

949,067.

Specification of Letters Patent.

Patented Feb. 15, 1910.

Application filed May 15, 1907. Serial No. 373,733.

To all whom it may concern:

Be it known that I, CHARLES E. FRYE, a citizen of the United States, and resident of Laconia, in the county of Belknap and State of New Hampshire, have invented new and useful Improvements in Door-Hangers, of which the following is a specification.

My invention relates to overhead door hangers for sliding or rolling doors and its object is the provision of a simple and effective door hanger which is very compact in its proportions, though at the same time of ample strength in its component parts. By means of the mechanical improvements presently to be described, I am enabled to construct a door hanger with all its usual accessories which will not project beyond the face of the structure to which the door is attached substantially any farther than the door itself.

My improved door hanger is especially designed for use on freight car doors where the situation demands as little consumption of lateral space as possible, two or three inches in the overall width of the freight car being in modern practice a matter of considerable importance.

In the drawings hereto annexed which illustrate an embodiment of my invention,—
Figure 1 is an elevation of a door hanger and structural members associated therewith with the exception of the protecting or inclosing apron; and Fig. 2 is a vertical section on the line 2—2 of Fig. 1.

A represents the frame work over the door opening and B a sliding or rolling door.

C is a hanger plate made of ordinary rolled iron or steel; it is a single forging made in one piece and shaped in the following manner. The portion C' which is adapted to attachment to the door B is left flat; an inset C² is formed in the plate immediately above the attachment portion C' and from and above the inset C² the hanger plate extends upwardly in a plane substantially parallel with the plane of the portion C' to the top C³ where a turn bend is formed, the rear portion of the hanger plate C⁴ being bent down substantially parallel with the front portion. Prior to the bending of the hanger plate, two slots C⁵ and C⁶ are cut in the plate in such position that when the plate is bent as shown in Fig. 2, these slots will lie opposite each other at the same level.

The wheel E is a simple flat tread wheel with chilled tread and provided with a trun-

nion pin E' which may be made separately and driven into the wheel or may be made integral therewith. The ends of the trunnion pin E' are inserted in the slots C⁵, C⁶ and are so proportioned that they may have a very slight vertical clearance in the slots and project a slight distance on each side from the surfaces of the hanger plate.

D is the wheel rail secured to the framework A and L-shaped in cross section. The rear portion of the wheel rail which is fastened to the framework A extends up to and beyond the level of the trunnion pin E'; the lower portion D' of the L-shaped rail serves as the tread or track on which the wheel E may move; and the front portion D² is bent upward so as to stand between the front side of the wheel E and the front portion of the hanger plate. The rail formed in this manner serves to guard the framework A, which is usually of wood, from being abraded by the end of the trunnion pin E' while the portion D² effectively guards the wheel from displacement outwardly and also prevents it from turning or cramping sidewise since there is a considerable engagement of surface to surface as between the side of the wheel E and the inner face of the rail portion D².

G designates a plate supported by the frame work A as by a supporting member F, the member being secured to the front of the frame work A at a point above the path of travel of the return end of the wheel carrier or hanger plate. The plate G has its front face substantially parallel with the plane of the front face of the door D, and has its lower edge in close proximity to the inset of the hanger bracket E, said lower edge providing a stop to limit the upward movement of the door to prevent the latter from causing the wheel E to leave the track. And where the supporting member F has its under face sufficiently close to the path of travel return bend C³, said support may have a similar effect to supplement the action of the lower edge of the plate G. And since the upturned edge D² of the track is spaced from the plate G a distance only slightly greater than the thickness of the hanger bracket portion, it will be understood that the wheel member E will be retained substantially central of the thickness of the door, the track and the plate G serving to limit any lateral movement of the hanger and retain the door against material wab-

bling. This construction adds no more to the overall width of the freight car—if the device be used on a freight car—than the essential freight car door itself. Moreover, the whole contrivance is easy to construct out of ordinary cheap material; is composed of few parts; the hanger plate is made in one piece; and the device is so constructed and organized that its parts and the car itself are protected from undue wearing.

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

1. The combination with a door casing, and a door positioned in front of and movable in the plane of its front face, of an overhead suspending device, said device including a portion secured to the outer face of the door, and a movement-limiting plate secured to the casing and having its front face substantially flush with the plane of the front face of the door.

2. The combination with a door casing, and a door positioned in front of and movable in the plane of its front face, of an overhead suspending device for the door, said device comprising a track carried by the door casing and a wheel-carrier secured to the outer face of the door, and a plate secured to the said door casing and having its front face substantially flush with the plane of the front face of the door, the lower edge of said plate coacting with the carrier to provide a limiting means to prevent excessive vertical movement of the door.

3. The combination with a door ceiling, and a door positioned in front of and movable in the plane of its front face, of an over-

head suspending device for the door, said device comprising a track secured to the casing, and a wheel-carrier secured to the outer face of the door, said carrier having a shoulder intermediate its vertical length, and a plate secured to the casing and having its front face substantially flush with the plane of the front face of the door, said plate having its lower edge co-acting with said shoulder of the carrier to provide a limiting means against excessive vertical movements of the door.

4. The combination with a door casing, and a door positioned in front of and movable in the plane of its front face, of an overhead suspending device for the door, said device comprising a track secured to the casing and having an upturned free edge, a wheel-carrier secured to the outer face of the door and formed to permit the wheel thereof to travel on said track, and a plate secured to the casing and having its front face substantially flush with the plane of the front face of the door, said plate being spaced from the up-turned edge of the track and also having its lower edge spaced from the upper face of the door to provide a passage-way through which the carrier extends, said lower edge of the plate and the carrier co-acting to provide a limiting means to prevent excessive vertical movement of the door.

Signed by me this 30th day of April, 1907.

CHARLES E. FRYE.

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