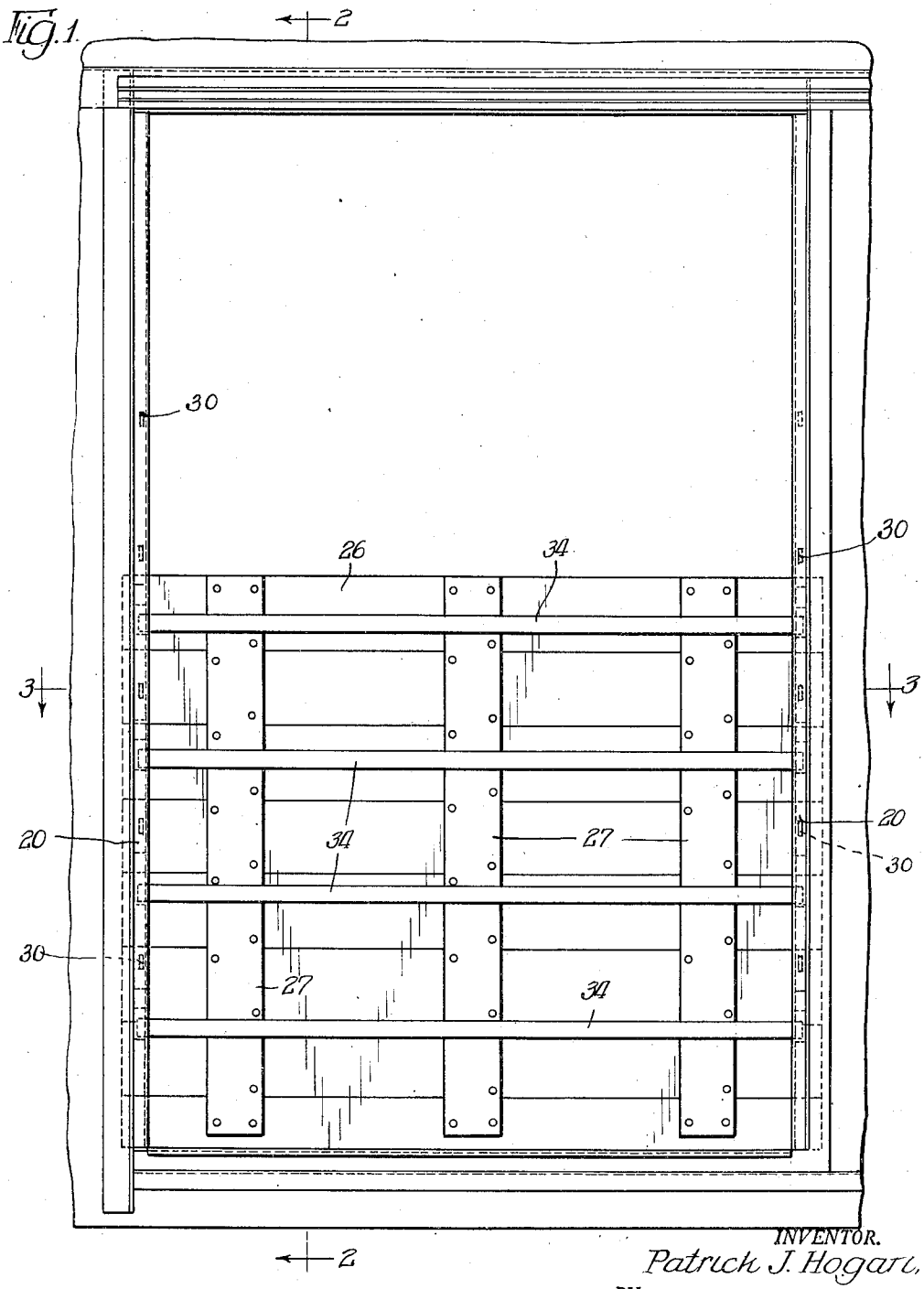
Jan. 3, 1950 P. J. HOGAN 2,493,720

RAILWAY CAR DOOR PROTECTOR

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Fig. 1.



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Fig. 2

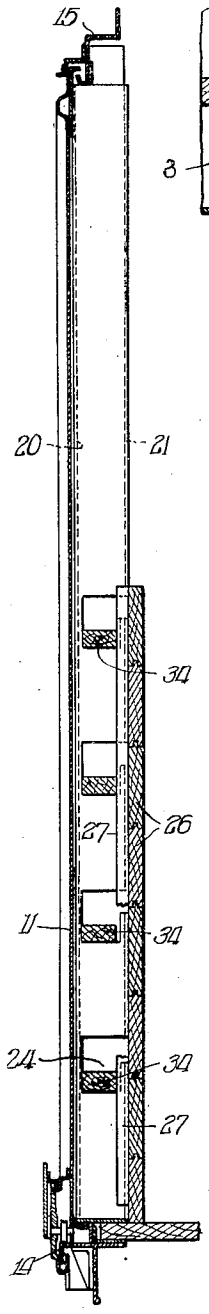


Fig. 3

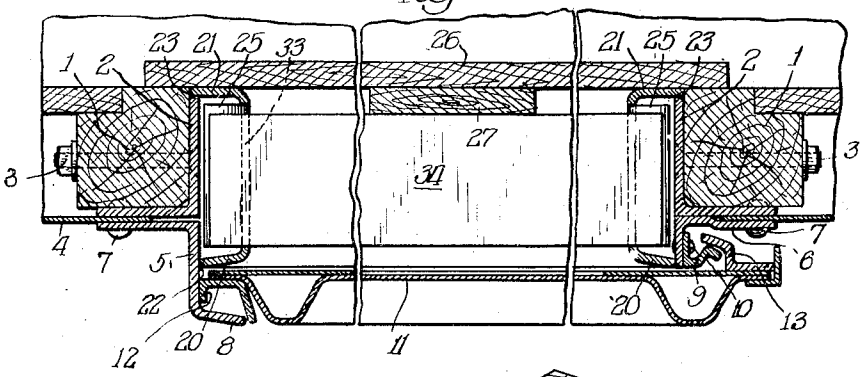
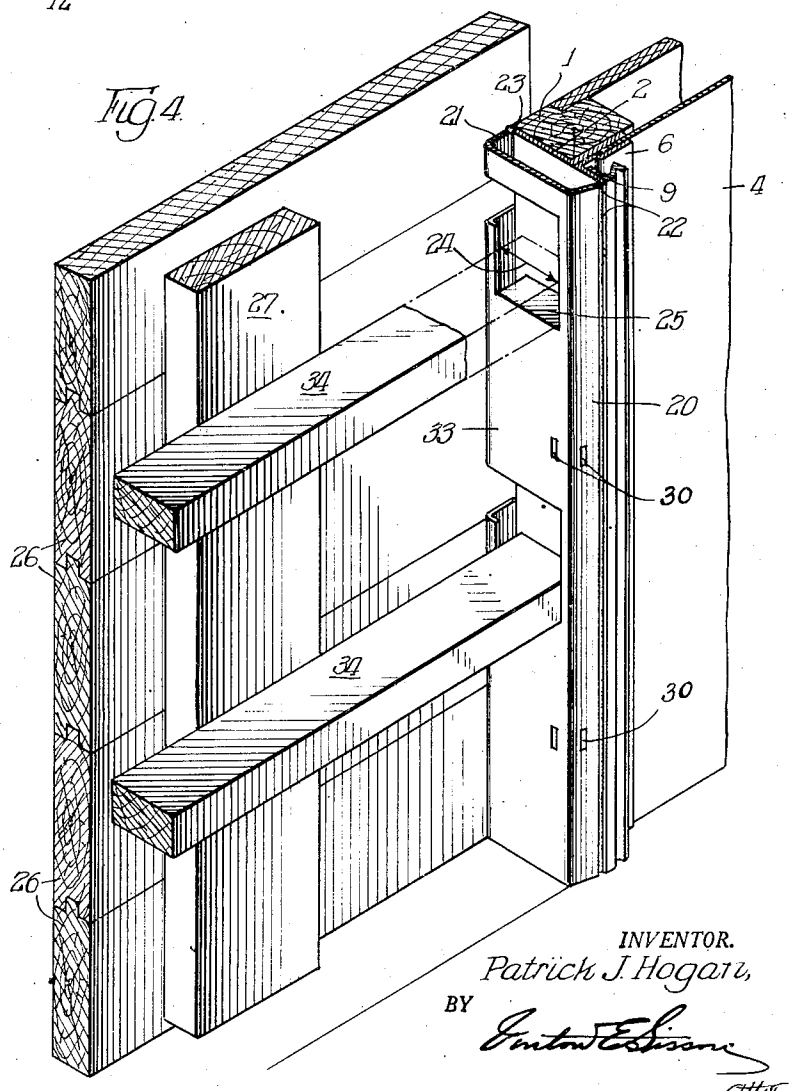


Fig. 4



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RAILWAY CAR DOOR PROTECTOR

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Fig. 5

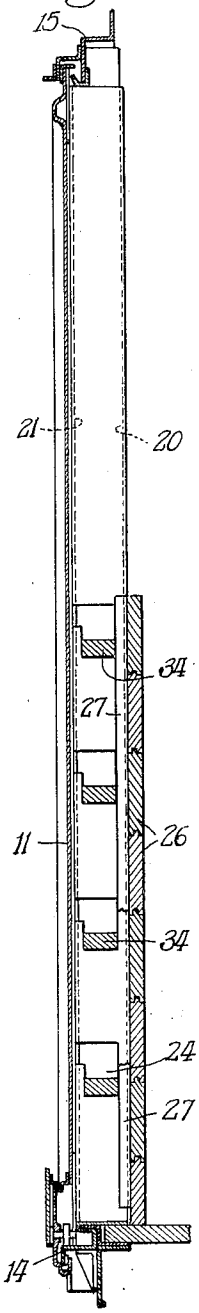
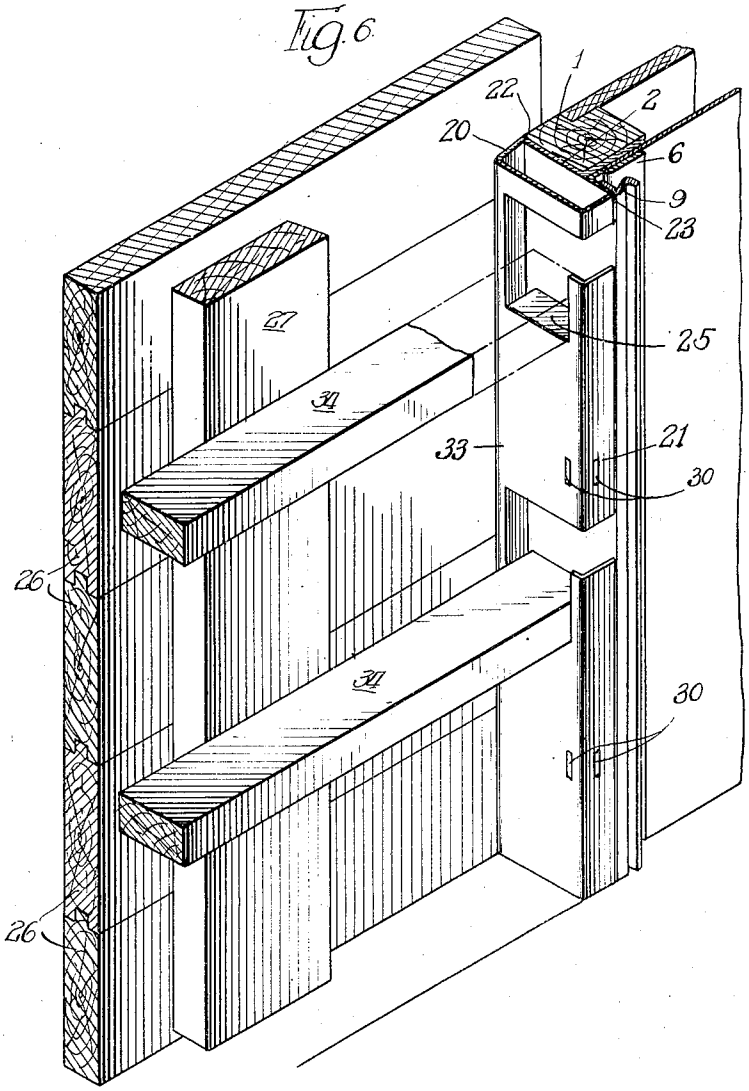


Fig. 6



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UNITED STATES PATENT OFFICE

2,493,720

RAILWAY CAR DOOR PROTECTOR

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Application February 12, 1945, Serial No. 577,531

4 Claims. (Cl. 20—30)

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My invention relates to railway rolling stock, and particularly to a means for protecting the doors of railway house cars from damage because of a shifting of the lading thereagainst due to service movements of the car, which comprises the principal object of the invention.

Another object of the invention is to so design the door protector so that it may be installed upon new cars or upon cars already in service.

A further object of the invention is to provide a door protector in such a manner that either of two types of lading retaining means may be used to protect the door from the shifting of said lading.

A still further object of the invention is to provide a door protector that may be installed upon cars already in service without damage to any of the parts thereof.

Other objects and advantages of the invention will appear in the following description thereof.

Referring now to the accompanying drawings forming part of this application and wherein like reference characters indicate like parts:

Figure 1 is a front elevation of a railway car door frame showing my improved door protection posts, with protecting bars, bands and auxiliary door in place.

Figure 2 is a vertical section on line 2—2 of Figure 1 showing the car door in place.

Figure 3 is a broken horizontal section on line 3—3 of Figure 1 showing the car door in place.

Figure 4 is an enlarged perspective view of a portion of a car door opening.

Figure 5 is a view similar to figure 2 showing the protecting bars as removable from the outside of the doorway.

Figure 6 is a perspective view, similar to Figure 4, of the modification shown in Figure 5.

In the drawings, the door posts are indicated at 1; the door post angles at 2 held to the door posts by means of bolts 3. Side wall sheathing of the car is indicated at 4 and the front 5, and rear 6, door stop angles are secured to the side sheathing 4 and post angles 2 by means of the row of rivets indicated at 7. The front door stop angle 5 is provided with a reflange 8 which functions as a portion of weather sealing means, and the rear door stop angle is provided with a portion 9 of weather sealing means secured thereto, as by the rivets 10. The door is indicated at 11 and is of the usual sliding type, provided with front 12 and rear 13 weather sealing means which are cooperative with the reflange 8 and sealing means 9, respectively, when the door is closed, to prevent dirt and other elements from

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entering the car between the vertical edges of the door and adjacent door frame. The car side sills are indicated at 14, upon which the door posts 1 and angle 2 rest, and the car side plate is shown at 15 which extends across the tops of the door and side posts of the car from end to end of the car.

In cars having sliding doors of the type just described, it is apparent that should the car be loaded with a plastic lading or the like, which might shift rather violently to one side or the other during service movements of the car, that part of the lading adjacent the doors may quite conceivably engage the door with such violence that the force would injure the door or ruin the sealing elements, or both, so that the door could not be operated, or the seals would not be tight, and thereby destroy a considerable portion of the utility of the door.

My invention, therefore, comprises a door protection post, preferably of channel-like form, with the edges of the flanges 20 and 21 thereof secured, as by welding 22 and 23, respectively, to the door stop angles 5 and 6 and the inner edge of the door post angles 2 and 1 provide such a door protection post for each door post of the car. It will be noted that one flange 21 and the web 33 of each protection post is provided with inverted L-shaped slots 24 and that a portion of the material in the wab 33, which is cut away to make the slot, is bent inwardly, as shown at 25, at right angles to said web to provide a sort of shelf at the bottom of the slot 24. The upper portion of the slot 24 which extends across the flange 21 is slightly deeper than the thickness of an ordinary 2 x 4, whereas the portion of said slot in the web 33 is slightly wider than the width of a 2 x 4, so that the ends of 2 x 4 pieces of lumber 34, of the proper length, extend across the door opening from protection post to protection post and may be slid laterally into the upper portions of opposite slots and then dropped into the lower portions thereof where they rest on the shelves 25 and are thereby held securely by gravity in the lower portions of the slots. To protect certain types of lading, as for example, barrels or large boxes, from being shifted against the doors, these 2 x 4 protecting bars may be sufficient. When, however, the lading is more plastic, such as bulk potatoes, or grain, it is obvious that an auxiliary door would be required in addition to the 2 x 4's. Therefore, I have provided the auxiliary door which comprises a series of tongued and grooved boards 26 secured to-

gether by the battens 27, and which auxiliary door may be nailed to the 2 x 4 protecting bars with the vertical margins of said auxiliary door resting against the flanges 21 of the protection posts, and the battens 27 positioned between said protection posts and against said 2 x 4's.

Auxiliary door boards may be nailed directly to inside face of 2 x 4's so as to obtain a flush condition with inside lining of cars.

For those instances when the character of the lading permits, such, for example, as relatively large boxes of light weight material, I have provided an alternative means to take the place of the 2 x 4 protecting bars. In Figures 1, 4 and 6 it will be noted that I have provided a series of vertically spaced slots 30 in the web 23 and flange 21 of each door protection post. These slots are for the application of banding iron strips extendable between said posts and which are found to be sufficient for protecting the door from larger units of lighter material.

In Figures 5 and 6 I have shown the L-shaped slots 24 as facing the outside of the car so that the 2 x 4's may be removed progressively from the outside of the car as the car is unloaded if such is necessary due to the character of the lading. L-shaped slots may be arranged so that 2 x 4's may be removed progressively from the inside of car as well, as shown in Figures 1, 2 and 3.

The accompanying drawings illustrate the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof, within the scope of the claims, will occur to persons skilled in the art.

I claim:

1. For use in a railway car having a doorway between spaced post assemblies, each assembly comprising a vertical metallic member having a portion lying in a plane normal to said doorway and a metallic door stop secured to said member and having a part substantially in the plane of said portion, and a door for closing said opening engaging said door stop when in closed position; means to protect said door from outward thrust of lading within the car, said means comprising a vertical channel member facing each post assembly with the flanges of said channels welded to said portion and part, respectively, to provide reinforcements for said post assemblies, one flange of each channel provided with a slot communicating with a slot in the web of the channel, the slot in the web being wider than the slot in the flange, with the upper edges of the slots being in substantially the same plane, and beams extending between said post assemblies for support within said slots in said webs, said beams being insertable in the slots in the webs through the slots in said flanges.

2. A railway car door protecting structure adapted to be secured to the door post assembly of a railway car comprising a metallic member including a web and a flange, a slot in the web of said member, a shelf-like portion extending inwardly from the base of said slot normally to

said web, and the slot in a flange of said member communicating with the slot in the web, said web slot being wider than said flange slot, the upper edges of said slots being substantially in the same plane, whereby one end of a beam may be inserted laterally through said flange slot and dropped vertically into said web slot and be supported by said shelf-like portion and retained in said opening by the walls of the web opening.

3. A door protector for a railway car having a doorway between spaced post assemblies and a door for closing said doorway; said protector comprising channel-shaped members having the flanges thereof secured to said asemblies, respectively, with the webs thereof spaced from said assemblies, the webs of said members being provided with slots, a protector bar extending between said members with the ends thereof installed within said slots so as to be supported by the webs of the channel-shaped members and the depth of the slot in the web being less than the width of said web so that the unremoved portion of the webs of said members resist outward thrust of a lading against said bar, a flange of each member being provided with a slot communicating with the upper part of said slot in the web thereof, the upper edges of said slots being in substantially the same plane, the slot in the web being wider than the slot in the flange, whereby the ends of said protector bars may be inserted laterally through said flange slots and dropped vertically into said web slots and retained therein by the walls thereof.

4. A door protector for a railway car having a doorway between spaced post assemblies and a door for closing said doorway; said protector comprising channel-shaped members having the flanges thereof secured to said assemblies, respectively, with the webs thereof spaced from said assemblies, the webs of said members being provided with slots of less depth than the width of said webs, a flange of each member being provided with a slot of less width than the slot in the web, and communicating with the upper part of a web slot, the upper edges of said slots lying in substantially the same plane, a protector bar extending between said members with the ends thereof within said slots so as to be supported by the webs of the channel-shaped members and so that the unremoved portion of the webs of said members resist outward thrust of a lading against said bar.

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