Sept. 19, 1950 T. MADLAND 2,522,761

RAILWAY HOUSE CAR

Filed April 23, 1947

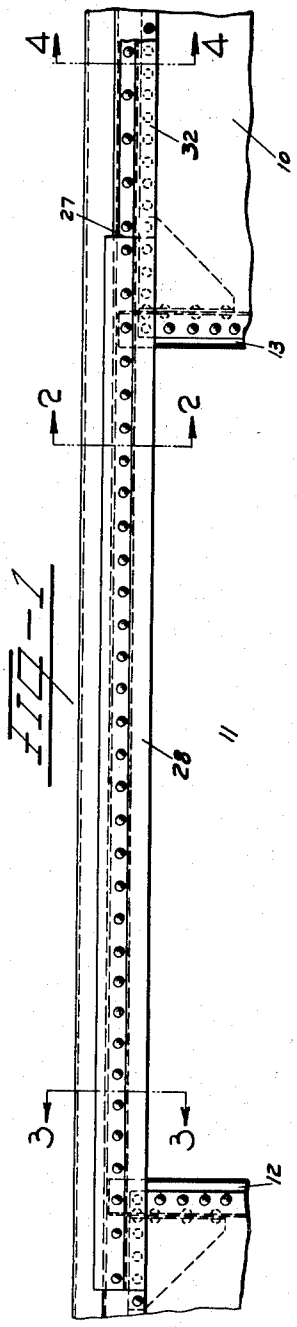


FIG. 1

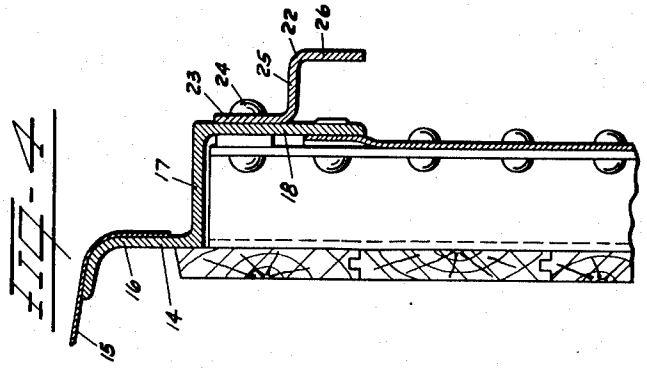


FIG. 4

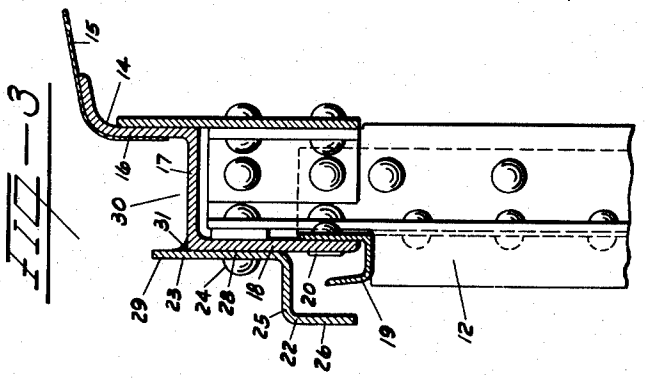


FIG. 3

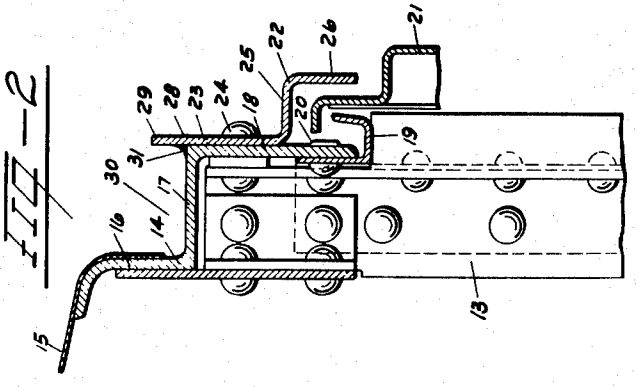


FIG. 2

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RAILWAY HOUSE CAR

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6 Claims. (Cl. 105—409)

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This invention relates to railway house cars and is directed more particularly to a construction for protecting both men and commodities from rain during car loading and unloading operations.

It is an object of this invention to provide railway house cars which shall embody troughs above the door openings formed in the cars capable of trapping and discharging rain and the like beyond the door openings.

A further object is to provide railway house cars which shall embody troughs for the door openings of the cars so constructed as to utilize members normally employed in the construction of such cars.

A further object is to provide railway house cars which shall include troughs whose construction shall not add to the cost of assembly of the cars.

A further object is to provide railway house cars which shall comprise troughs that serve to reinforce the cars.

A further object is to provide railway house cars which shall incorporate troughs whose construction shall not increase the number of members normally used in the cars or the labor of assembly.

Other objects of the invention will become clear as the description thereof proceeds.

In the drawings forming part of this specification:

Fig. 1 is a fragmentary elevation of the upper part of a railway house car embodying the instant invention, the door being omitted for the sake of clarity.

Fig. 2 is a vertical section taken on line 2—2 of Fig. 1 showing the upper portion of a sliding door.

Fig. 3 is a vertical section taken on line 3—3 of Fig. 1.

Fig. 4 is a vertical section taken on line 4—4 of Fig. 1.

In the drawing the reference numeral 10 designates a railway house car as a whole. As is usual in the construction of railway house cars a door opening is formed in each side of the car. A portion of one of these door openings is illustrated and is designated by the reference numeral 11.

The width of the door opening is defined by means of front and rear door posts 12 and 13, those illustrated being substantially Z-shaped in section. The top of the door opening is defined by means of a stress carrying side plate 14 which extends substantially from end to end of the car and supports the car roof 15. The upper ends

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of the door posts 12 and 13 are secured to the side plate as illustrated in the drawing, or in any other desired manner.

The side plate embodies an inner upstanding flange 16, an outwardly extending web 17 and an outer depending flange 18. A trough-shaped header 19 is secured to the depending flange 18 of the side plate as by means of rivets 20 so as to extend outwardly beyond the depending flange.

A sliding door 21 is mounted upon the car in order to close the door opening 11 in any desired manner. A door and mounting mechanism therefor well adapted for use upon house cars, known as box and automobile cars, are disclosed in the patent in Ditchfield, 1,895,151, and the patent to Beauchamp, 2,373,447 to which reference is hereby made. As is shown in Fig. 2 of the drawing, the door is disposed outwardly of the door posts and in order to retain the upper portion of the door upon the car, a door retainer 22, which overlaps the outer face of the door, is utilized.

The door retainer, which is preferably Z-shaped in section, embodies an upstanding flange 23 secured as by means of rivets 24 to the depending flange 18 of the side plate. The door retainer embodies also an outwardly extending web 25 and a depending flange 26 which lies outwardly of the door. The retainer 22 illustrated is formed of two sections which are welded together at 27. The section 28 of the retainer extends across the door opening and for a short distance beyond each side of the door opening as is clearly shown in Fig. 1 of the drawings. With particular reference to Figs. 1, 2, and 3 of the drawings, it will be seen that the upstanding attaching flange 23 of retainer section 28 projects above the web 17 of the side plate as shown at 29 and cooperates with the side plate in order to provide a trough 30. Caulking material, indicated at 31, may be utilized to prevent any water which is trapped by the trough from seeping downwardly between flanges 18 and 23 of the side plate and retainer, respectively. In addition to this a plastic cement may be used between the abutting faces of flanges 18 and 23.

As shown in Figs. 1 and 4 of the drawings, upstanding flange 23 of section 22 of the retainer terminates below web 17 of the side plate. It is apparent, of course, that if desired the projecting portion 29 of flange 23 may continue for the full length of the door retainer.

It will be apparent from the foregoing description taken in connection with the drawing that the trough 30 will function to trap water draining from the roof of the car and discharge this wa-

ter from the car a substantial distance beyond the sides of the door opening. Accordingly, men and commodities will be well protected in the operations of loading and unloading the cars. Moreover, the projection of the upstanding flange 23 of the door retainer increases the section of the retainer substantially and thereby serves to provide additional reinforcement for the stress carrying side plate, particularly across the door opening.

The instant invention has been illustrated embodied in the type of railway house car which is known as a box car. It will be apparent, however, to those skilled in the art that the invention is applicable as well to automobile cars, to refrigerator cars, and to any other type of house car. Moreover, while the door retainer has been shown as formed of two sections welded together, it will be clear that the retainer may be formed of a single section whose upstanding flange may, if desired, be cut away beyond the rear edge of the door opening.

It will be apparent that numerous changes and modifications in the details of the invention will be clear to those skilled in the art. It is intended, therefore, that all such modifications and changes be comprehended within this invention, which is to be limited only by the scope of the claims appended hereto.

I claim:

1. In a railway house car having a door opening, a substantially Z-shaped side plate extending substantially from end to end of the car across the top of said door opening and embodying an inner upstanding flange, an outwardly extending web, and an outer downwardly extending flange, and a retaining member for a sliding door extending across said door opening to the end of the travel of the door, said retaining member having an upstanding flange secured to said downwardly extending flange and extending outwardly from said dowwardly extending flange and downwardly, said upstanding flange of said retaining member projecting above said web of said side plate and cooperating with said inner upstanding flange and web of said side plate to form a trough.

2. In a railway house car having a door opening, a substantially Z-shaped side plate extending substantially from end to end of the car across the top of said door opening and embodying an inner upstanding flange, an outwardly extending web, and an outer dowwardly extending flange, and a retaining member for a sliding door extending across said door opening to the end of the travel of the door, said retaining member having an upstanding flange secured to said downwardly extending flange and extending outwardly from said downwardly extending flange and downwardly, said upstanding flange of said retaining member projecting above said web of said side plate and cooperating with said inner upstanding flange and web of said side plate to form a trough, said projecting portion of said upstanding flange of said retaining member terminating beyond and adjacent to the edges of said door opening.

3. In a railway house car having a door opening, a substantially Z-shaped side plate extending substantially from end to end of the car across the top of said door opening and embodying an inner upstanding flange, an outwardly extending web, and an outer downwardly extending flange, and a retaining member for a sliding door extending across said door opening

to the end of the travel of the door, said retaining member having an upstanding flange secured to said downwardly extending flange and extending outwardly from said downwardly extending flange and downwardly, said upstanding flange of said retaining member projecting above said web of said side plate and cooperating with said inner upstanding flange and web of said side plate to form a trough, said projecting portion of said upstanding flange of said retaining member terminating beyond and adjacent to the edges of said door opening, the remaining portion of said upstanding flange of said retaining member terminating below the web of said side plate.

4. In a railway house car having a door opening, a substantially Z-shaped stress carrying member extending substantially from end to end of said car across the top of said door opening, said member comprising an outwardly extending web, an inner substantially vertical flange above said web, an outer substantially vertical flange below said web, a second web extending outwardly from said latter flange below said first-mentioned web and a substantially vertical flange below said second web and spaced from said outer substantially vertical flange, said second web and said flange below said second web being adapted to retain a sliding door upon said car and extending at least to the end of the travel of the door, said outer flange projecting above said first mentioned web and cooperating therewith and with said inner flange to form a trough.

5. In a railway house car having a door opening, a substantially Z-shaped side plate extending substantially from end to end of the car across the top of said door opening and embodying an inner upstanding flange, an outwardly extending web, and an outer downwardly extending flange, a retaining member for a sliding door extending across said door opening to the end of the travel of the door, said retaining member having an upstanding flange secured to said downwardly extending flange and extending outwardly from said downwardly extending flange and downwardly, and a projection on said side plate extending above said web of said side plate and across said door opening, said projection cooperating with said inner upstanding flange and web of said side plate to form a trough.

6. In a railway house car having a door opening, a substantially Z-shaped side plate extending substantially from end to end of the car across the top of said door opening, and embodying an inner upstanding flange, an outwardly extending web, and an outer downwardly extending flange, and a projection on said side plate extending above said web of said side plate and across said door opening, said projection terminating beyond and adjacent to the edges of said door opening and cooperating with said inner upstanding flange and said web of said side plate to form a trough.

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REFERENCES CITED

The following references are of record in the file of this patent:

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