

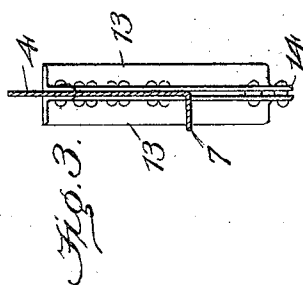
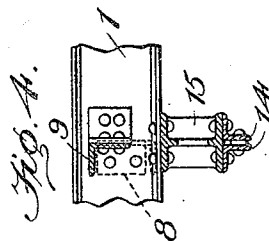
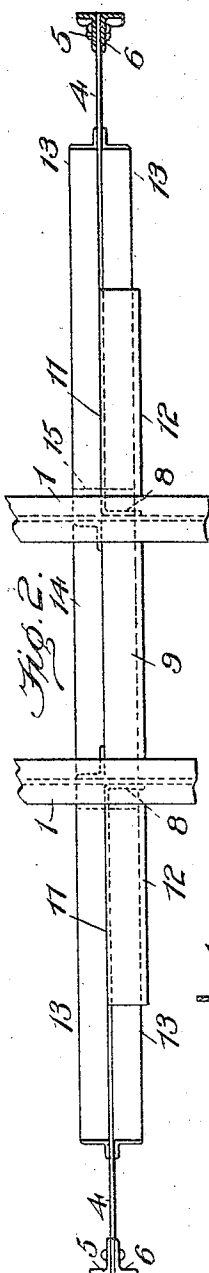
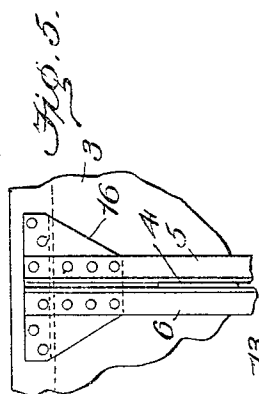
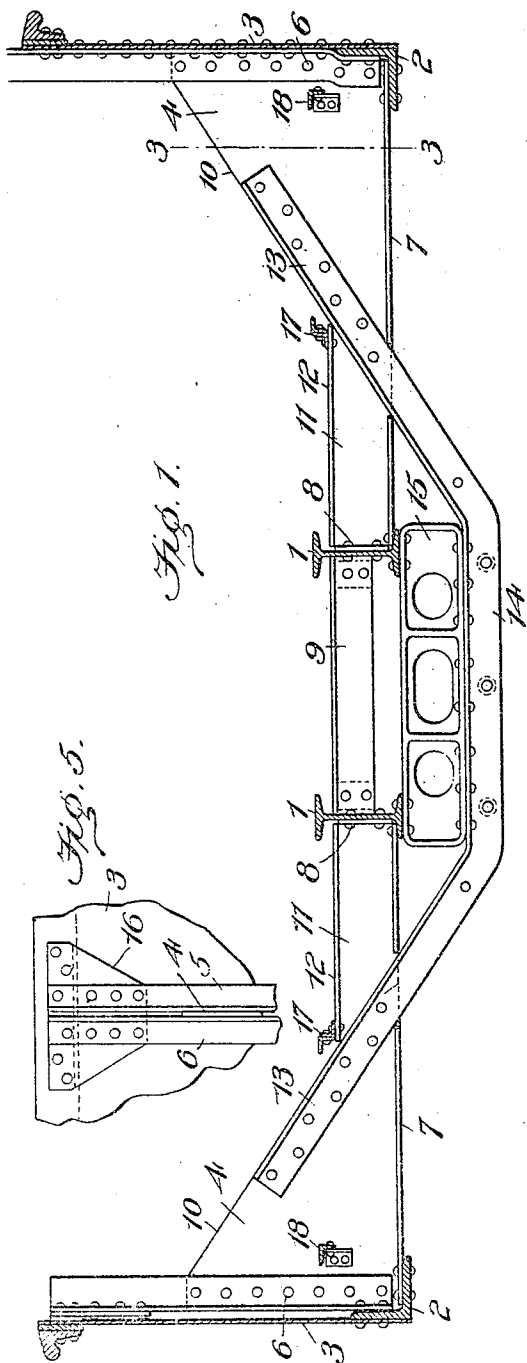
No. 808,342.

PATENTED DEC. 26, 1905.

F. W. CHRISWELL.

RAILWAY CAR.

APPLICATION FILED SEPT. 11, 1905.



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UNITED STATES PATENT OFFICE.

FREDERICK W. CHRISWELL, OF NEW YORK, N. Y., ASSIGNOR TO AMERICAN CAR & FOUNDRY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

RAILWAY-CAR.

No. 808,342.

Specification of Letters Patent.

Patented Dec. 26, 1905.

Application filed September 11, 1905. Serial No. 278,043.

To all whom it may concern:

Be it known that I, FREDERICK W. CHRISWELL, a citizen of the United States, residing at New York, N. Y., have invented a certain new and useful Improvement in Railway-Cars, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which,—

Figure 1 is a cross-sectional view through a car constructed in accordance with my invention. Fig. 2 is a top plan view of the gussets and part of the center sill as well as the vertical posts. Fig. 3 is a sectional view on the line 3 3 of Fig. 1. Fig. 4 is a vertical longitudinal sectional view through the center of the underframing, and Fig. 5 is a view in elevation of one of the vertical posts and a portion of the car side.

This invention relates to railway-cars; and one of the objects of the invention is to provide a truss for bracing the car sides, as well as the underframing, and to provide rigidity to the car-body for resisting strains to which it will be subjected.

Other objects and advantages as well as the novel details of construction of this invention will be specifically described hereinafter, it being understood that changes in form, proportion, and minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

In the drawings, 1 designates longitudinally-arranged I-beam center-sill members, and 2 designates the side sills supporting the plate-girder sides 3. Trusses are provided for the plate-girder sides and are connected to the center sills to brace the sides of the car, so as to transfer part of the load carried by the center sills to the car side. These trusses are arranged suitable distances apart, and they preferably consist of the gussets 4, which are secured to the sides of the car by angles 5 and 6, between which they are riveted and which form vertical posts secured to the plate-girder sides and to the angle side sills 2. The gussets are flanged at their bottom edges, as indicated at 7, and are riveted to the bottom flanges of the side sills and to the webs of the center-sill members 1, being se-

cured to the latter by rivets which pass through the flanges 8 at the ends of the gussets and which pass through flanges in a filler 9. The upper inclined edges 10 of the gussets 4 extend downwardly at an angle of about forty-five degrees and to a point intermediate the center-sill members and sides and are then provided with extensions 11, which are flanged at their upper edges, as at 12, and act as transversely-extending floor-supports, the flange 7 at the bottom of the gusset extending from side sill to center sill. In order to additionally brace the truss thus formed, I utilize a commercial shape or a pair of them, which will preferably consist of angles 13, bent so that their ends will preferably aline with the inclined edges 10 of the gussets and extend downwardly below the center-sill members, with intermediate horizontal portions 14, which pass beneath a casting 15, interposed between the angles and the center sill. The lateral flanges of the angles 13 project outwardly at their upper edges, as clearly indicated in Fig. 1, so that the structure thus formed will have a tendency to efficiently resist any strains to which the car-body will be subjected. The vertical posts between which the gussets 4 are secured may also be fastened to the car side by connection-plates 16. It will be observed that the upper flanges of the center sill extend above the top horizontal edge of the gusset 4, and in order to provide means for fastening the floor I attach Z-shaped floor-supports 17 to the extensions 11 of the gussets and angles 18 to the gussets.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a railway passenger-car, the combination with a center sill and sides, of gusset-plates secured to the sides and center sill, and angles connected to the gussets and extending beneath the center sill; substantially as described.

2. In a railway passenger-car, the combination with a center sill and plate-girder sides, of gussets connected to the sides, and angles passing beneath the center sill and having upwardly and outwardly deflected ends for connecting the gussets; substantially as described.

3. In a railway-car, the combination with

a center sill and plate-girder sides, of gussets connected to the plate-girder sides and having flanged lower ends, and means passing beneath the center sill and connecting the
5 gussets; substantially as described.

4. In a railway-car, the combination with a center sill and plate-girder sides, of gussets 4 connected to the sides and center sill, and angles 13 connected to the gussets and passing
10 below the center sill; substantially as described.

5. In a railway-car, the combination with a center sill and plate-girder sides, of gussets having flanged straight lower edges and upper
15 edges parallel with the lower edges for a portion of their length and extending upwardly the remaining portion of their length, and means passing beneath the center sill and in-

clined upwardly to connect the gussets on the respective sides of the center sill; sub- 20
stantially as described.

6. In a railway-car, the combination with plate-girder sides and a center sill, of trusses comprising transversely-extending floor-sup-
25 porting sections, gussets connecting said sections to the plate-girder sides, and a member for connecting the gussets and passing beneath the center sill; substantially as described.

In testimony whereof I hereunto affix my 30
signature, in the presence of two witnesses, this 5th day of September, 1905.

FREDERICK W. CHRISWELL.

Witnesses:

ROBT. G. JEFFERY,
A. E. OSTRANDER.