March 31, 1925. 1,531,761

I. A. SEIDERS

STEEL CAR CONSTRUCTION

Filed March 28, 1924

Fig. 1.

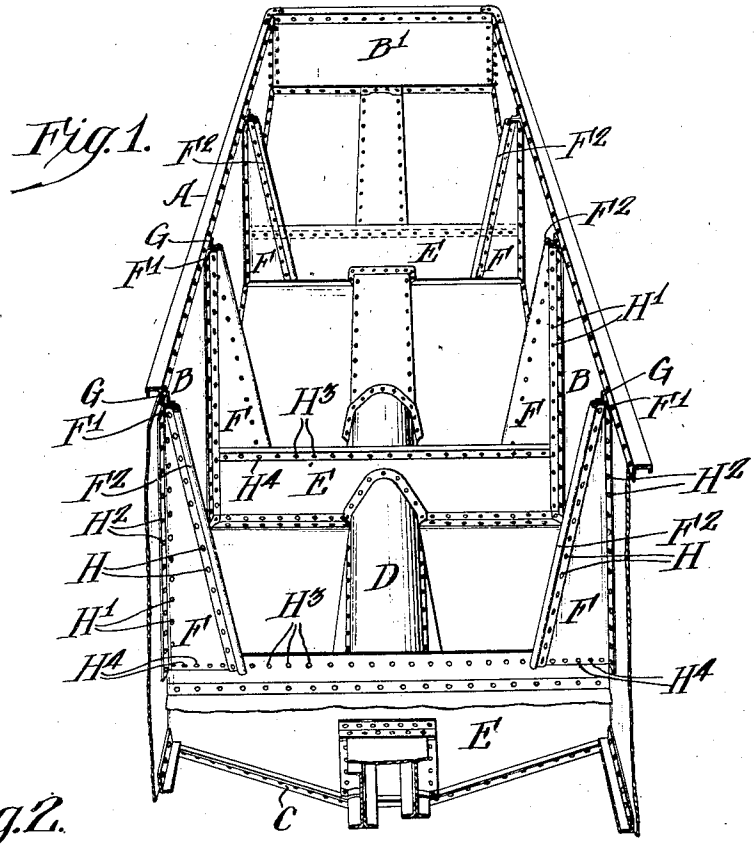


Fig. 2.

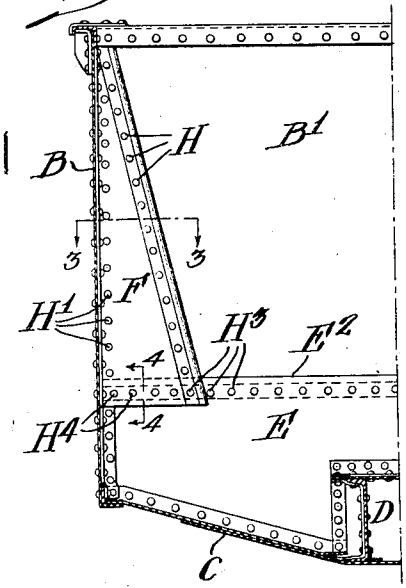


Fig. 3.

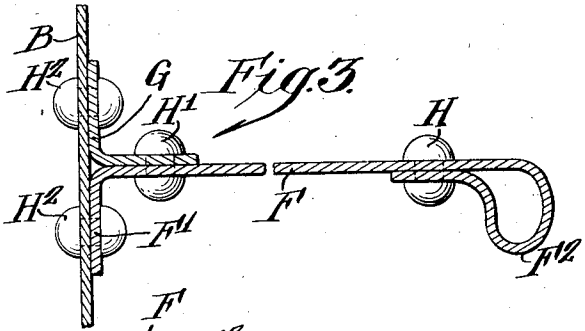
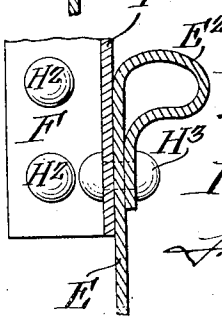


Fig. 4.



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UNITED STATES PATENT OFFICE.

IRWIN A. SEIDERS, OF READING, PENNSYLVANIA.

STEEL-CAR CONSTRUCTION.

Application filed March 28, 1924. Serial No. 702,539.

To all whom it may concern:

Be it known that I, IRWIN A. SEIDERS, a citizen of the United States of America, and resident of Reading, in the county of Berks, in the State of Pennsylvania, have invented certain new and useful Improvements in Steel-Car Construction, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to the construction of steel cars and has for its object to provide a steel car structure of great strength and great simplicity and one peculiarly adapted to resist the destructive strains to which such constructions are subjected. The nature of my improvements will be best understood as described in connection with the drawings in which—

Figure 1 is a perspective view of a portion of a car constructed in accordance with my invention.

Figure 2 is a sectional elevation showing the tie and gusset plates and their mode of attachment to the car body and to each other.

Figure 3 is a sectional view on the line 3—3 of Fig. 2, and

Figure 4, a sectional view on the line 4—4 of Fig. 2.

A indicates the car body having steel sides indicated at B, B; B′ indicating one of the ends of the car body while at C, I have indicated the bottom of the car. D indicates a longitudinal bolster extending along the bottom of the car. E, E, are tie plates riveted to and connecting the lower portions of the sides B, B; the upper edges of these tie plates are bent over to one side to form a bulb, as indicated at E^2, the edge being abutted against the body of tie plate and riveted to it by rivets H^3, as best shown in Fig. 4. F, F, etc., are gusset plates which are riveted to the sides of the car body, preferably, as indicated in Fig. 3, a flange F′ being formed along one edge of the gusset and an angle G riveted to the gusset on the opposite side as by rivets H′, the flange and angle plate being riveted to the sides of the car by rivets H^2. The inner edge of the gusset plates is bent into a bulb, as indicated at F^2, the extreme end being abutted against the body of the gusset and held by rivets indicated at H. The gusset plates are of tapered form, as indicated, and at their lower and broader ends they are riveted to the tie plates by rivets indicated at H^4.

Preferably and for obvious reasons the bulbs on the tie plates and connected gusset plates are bent in opposite directions so that where the plates loop and are riveted together by rivets H^4 the flat surface of the plates will contact with each other.

It will be recognized that my described construction, while exceedingly simple, is one which gives greater strength than constructions heretofore used and that it is also a construction which is peculiarly well adapted to resist the conditions occurring in practical use and tending to distortion or injury of parts of the car structure.

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

1. A steel car construction having its sides braced by tapered gusset plates riveted to the inside of the sides and having their inner edges bent over to form bulbs along the inner edges of the gussets, said edges being riveted to the body of the gussets back of the bulbs so formed.

2. A steel car construction having its sides secured together at their lower portions by tie plates the top edges of which are bent over to form a bulb and riveted to the body of the tie plate.

3. A steel car construction comprising in combination steel sides, tie plates riveted to the lower portion of said sides and having their top edges turned over to form a bulb and riveted to the body of the plates and tapered gussets riveted to the sides and to the tie plates, said gussets having their inner edges bent over to form bulbs and riveted to the body of the gussets.

4. A steel car construction comprising in combination steel sides, tie plates riveted to the lower portion of said sides and having their top edges turned over to form a bulb and riveted to the body of the plates and tapered gussets riveted to the sides and to the tie plates, said gussets having their inner edges bent over to form bulbs and riveted to the body of the gussets, the bulbs on the tie plates and attached gussets being formed on opposite sides of the plates.

IRWIN A. SEIDERS.