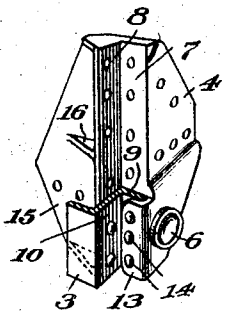
Oct. 9, 1928. 1,686,748

F. H. HARDIN

CAR CONSTRUCTION

Filed July 14, 1927

Fig. 4



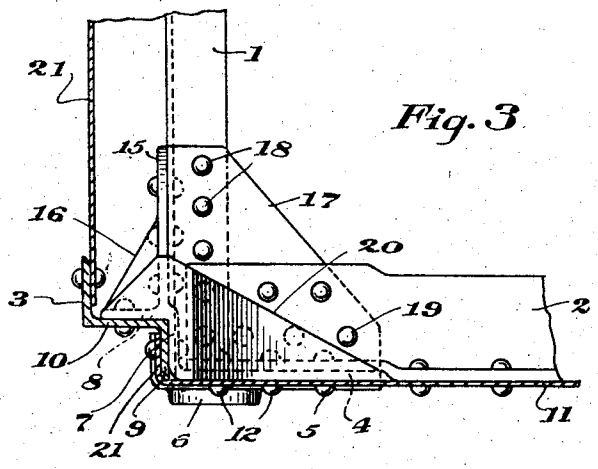


Fig. 3

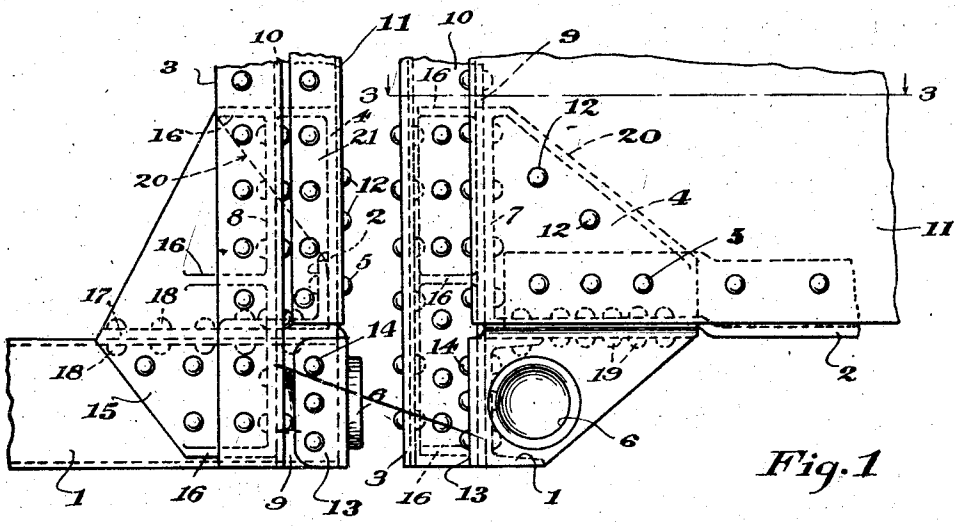


Fig. 1

Fig. 2

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Patented Oct. 9, 1928. 1,686,748

UNITED STATES PATENT OFFICE.

FRANK H. HARDIN, OF BRONXVILLE, NEW YORK.

CAR CONSTRUCTION.

Application filed July 14, 1927. Serial No. 205,731.

The invention relates to railway freight cars, and has for its object to provide an integral reinforcing bracket constituting means to secure together the adjacent ends of a longitudinal frame member (sill or plate), a lateral frame member (sill or plate) and a vertical frame member (corner post) and also to maintain such frame members in their proper angular relation.

Another object is to provide such a reinforcing bracket for railway freight cars which is offset for engagement with and attachment to two sides of the vertical corner post.

Another object of the invention is to provide a reinforcing bracket comprising a pair of substantially vertical walls arranged at right angles to each other and formed as a single piece casting, the walls being secured to the side sill and end sill, respectively, and one of the vertical walls being offset for attachment of the corner post.

With these and other objects in view, my invention consists in certain novel features of construction and arrangement of parts, hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is an elevational view of my device applied to a freight car.

Figure 2 is a side elevation of the construction shown in Fig. 1, the side wall being omitted.

Figure 3 is a sectional view taken on the line 3—3, Fig. 1.

Figure 4 is a perspective view of the integrally cast bracket, a portion of the corner post being shown as secured thereto.

In the manufacture of railway cars, it is highly desirable that the wall framing of the cars, and particularly the car ends, be strongly built in order to properly resist end shocks and crushing stresses to which such cars are subjected. To this end, I provide reinforcing brackets, particularly adapted for car end structures, which are provided with portions for attachment to the side and end sill of the car underframe, said brackets being further provided with suitable attaching surfaces for receiving the lower ends of the car posts, the car post attaching surfaces of the bracket being offset or spaced so as to maintain said posts in proper planes relative to the car structure.

In the construction illustrated, the side sill 1 underlies the adjacent end of the end sill 2 and the Z-bar corner post 3 is positioned adjacent the juncture of the side sill and end sill. The two sills and the post are secured together by an integrally cast bracket having an end wall 4 secured to the end sill by rivets or other means 5, the lower portion of the end wall being fashioned with a push pole pocket 6 cast therein. This end wall is offset at 7 and 8 to provide means for respectively securing the flange 9 and web 10 of the Z-bar corner post 3 to the bracket. The sheet steel end 11 of the car may advantageously be secured to the end wall of the bracket by rivets 5 and 12 and is preferably provided with a flange 21 secured to the corner post and offset portion 7 of the end wall of the bracket. The end wall is also offset at 13 for securing the outer end of the side sill and the lower end of the corner post to the bracket by means of the rivets 14. The bracket also is formed with a side wall 15 which is attached to the side sill 1. The horizontal web portions 16 of the bracket secure its side wall to the end wall.

The bracket also has a horizontal wall 17 which is integral with the end and side walls and is secured to the side sill by rivets 18 and to the end sill by rivets 19. The bracket is formed with a reinforcing flange 20 integrally united to the adjacent upper portions of the end and side walls, such flange effectively stiffening the bracket.

The side wall 21, which is shown in the drawings as a steel sheet, is preferably secured to the outside flange of the Z-bar post 3.

In a railway car embodying the invention, the adjacent ends of the side sill 1, end sill 2 and corner post 3 are rigidly secured together and each frame member is retained in its proper angular relation, thereby producing an extremely strong and desirable construction.

I have shown and described the bracket as applied to the lower corner of a car but obviously a similar application could be made at the upper corner of the car and still come within the scope of the invention.

While I have shown the preferred form of my invention, it is obvious that various minor changes in the size, shape and construction of my reinforcing bracket can be made and substituted for those herein shown and

described without departing from the spirit of my invention.

I claim:

1. In a railway car; the combination of a longitudinal frame member, a lateral frame member, a vertical frame member, a single piece bracket securing said members together, said bracket comprising an end wall offset for engagement and attachment with two sides of the vertical member, a side wall attached to the longitudinal member, and a horizontal wall integral with said end and side walls attached to the longitudinal and lateral members.

2. In a railway car; the combination of a longitudinal frame member, a lateral frame member, a vertical frame member, a single piece bracket securing said members together, said bracket comprising an end wall having a plurality of offset portions which engage and are attached to respective sides of the vertical member and one of which is attached to the longitudinal member, a side wall attached to the longitudinal member, and a horizontal wall integral with said end and side walls attached to the longitudinal and lateral members.

3. In a railway car; the combination of a longitudinal frame member, a lateral frame member, a vertical frame member, a single piece bracket securing said members together, said bracket comprising an end wall offset for engagement and attachment with two sides of the vertical member, a side wall attached to the longitudinal member, a horizontal wall integral with said end and side walls attached to the horizontal and lateral members, and a unitary flange adjacent the top of the end and side walls

In testimony whereof I affix my signature.

FRANK H. HARDIN.