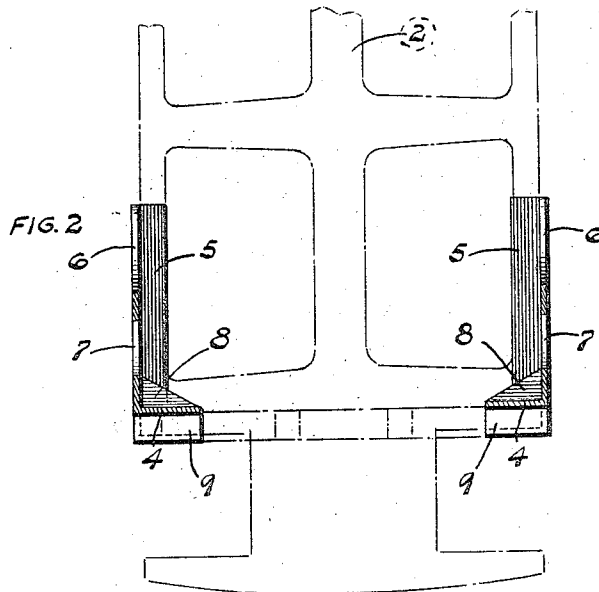
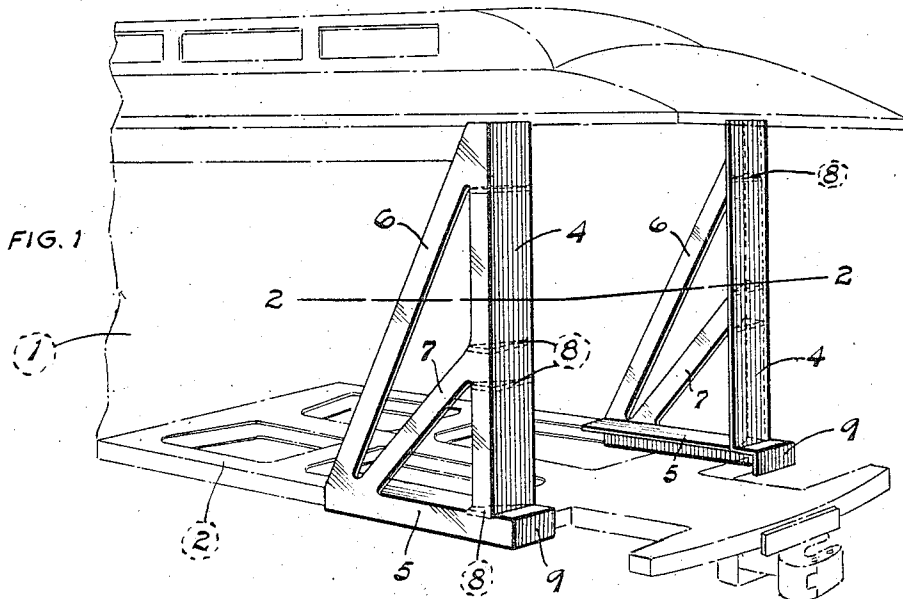


B. V. H. JOHNSON.
 REINFORCING CORNER POST AND END FRAME BRACE FOR CARS.
 APPLICATION FILED APR. 29, 1911.

1,064,835.

Patented June 17, 1913



WITNESSES

Wm. J. Janss.
 E. M. Harrington.

INVENTOR

BOONE V. H. JOHNSON

BY *J. R. Carmichael* ATT'Y.

UNITED STATES PATENT OFFICE.

BOONE V. H. JOHNSON, OF ST. LOUIS, MISSOURI, ASSIGNOR TO DOUBLE BODY BOLSTER CO., A CORPORATION OF NEW JERSEY.

REINFORCING CORNER-POST AND END-FRAME BRACE FOR CARS.

1,064,835.

Specification of Letters Patent.

Patented June 17, 1913.

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To all whom it may concern:

Be it known that I, BOONE V. H. JOHNSON, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Reinforcing Corner-Posts and End-Frame Braces for 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 perspective view of the end portion of a car body and showing my improved reinforcing corner post and end frame brace applied thereto; Fig. 2 is a horizontal section taken approximately on the line 2-2 of Fig. 1.

My invention relates generally to railway cars, and more particularly to an improved reinforcing corner post and end frame brace, the principal object of my invention being to provide a simple, strong and efficient construction comprising integral braced members in the form of corner posts which can be readily applied to either new or old car bodies of wooden or steel construction for strengthening and bracing the ends or end frames thereof.

My improved reinforcing corner post is particularly designed for use in connection with combined double body bolsters and platforms of the type shown in Patent #774,474 and the one-piece end frames of the type shown in Patents #917,716 and 929,705.

While my improved construction is generally adaptable for use upon all forms and types of cars either of wood or metal construction, it is particularly adapted for use on the lighter types of railway cars, as for instance, street cars and cars used in inter-urban service.

A further object of my invention is to provide a simple construction, combining great strength and rigidity, with lightness of weight, which can be advantageously employed in connection with the present types of car bodies for materially strengthening the end frames and corners thereof, and resisting severe end shocks, due to collisions, and overcoming all tendency of cars to telescope, thereby affording a maximum degree of protection to life and property.

My invention consists in certain features of novelty hereinafter more fully described and claimed.

Referring by numerals to the accompanying drawings, 1 designates the car body, 2 the combined double body bolster and platform, which parts are of ordinary construction, or other well known construction in the car building art.

My improved end construction used in connection with the car body and parts just mentioned comprises a braced member preferably in the form of an upright or corner post adapted to be positioned at the corner of the car body and extending from the underframe or double body bolster to the deck of the car body, as shown in the drawing.

4 designates an upright or post which is preferably L-shaped in cross-section, and extending rearwardly from the lower end of this post or upright is a horizontally disposed member 5, preferably of inverted L-shape in cross-section and adapted to engage the underframe or the double body bolster 2.

Extending between the end of this member 5 and the upper end of the post or upright is a brace 6, and, if desired, one or more intermediate braces, such as 7, may be provided between the member 5 and the central portion of the post or upright 4.

In order to further reinforce and strengthen the upright or post, a series of triangular strengthening ribs 8 are arranged at suitable distances apart on the inside of said post or upright, as shown in the drawings.

The extension 5 and the braces 6 and 7 are formed integral with the post or upright 4, and thus a one-piece member is provided which can be readily applied to the end of a car body, and which forms a very rigid and effective construction which strengthens and reinforces the end frames of the car body and combines with said end frame in resisting end shock and strains due to collisions and which braced ends will materially minimize the telescoping of cars due to collisions while the cars are under high speed.

9 is a shelf-like bracket at the lower end of the member 4 which embraces the ends of the end sill, and also affords a support for the end framing, shown in dotted lines in Fig. 2.

Where my improved construction is ap-

plied to old cars the corner posts thereof are removed and the posts or uprights 4 of my improved structure become the corner posts of the car body and the extensions 5 on the lower ends of said posts engage the side sills of the car underframe. When my improved invention is utilized in new cars the uprights 4 form the corner posts of the car body, the shelf-like extensions or brackets 9 on the lower ends of the corner posts serve as supports for the end frame and end wall of the car body and the inwardly projecting portions of the uprights 4 are positioned directly behind the end frame or between said end frame and the end wall of the car body.

In the construction of my improved end frame reinforcing member I prefer to make the inwardly extending leg or flange which fits directly against the inner face of the end frame considerably wider than the leg or flange fitting against the side of the car, inasmuch as such construction provides a bearing of considerable area for the end frame, and therefore distributes the force of strains and shocks over a considerable area.

In the construction of the present day types of railway cars utilized in passenger service, one of the prime objects of car builders is to reinforce and strengthen the end portions of the car bodies in order to reduce to a minimum the tendency of the cars to telescope in case of collisions, thus affording a high degree of safety to life and property. Large numbers of passenger cars are built wherein combined double body bolsters and platforms are utilized in connection with one-piece end frames, and my improved construction, as herein described, readily combines with these parts in producing a very strong, substantial and rigid structure that is anti-telescopic in effect.

I am of course well aware that all-steel cars have been constructed, but it appears that in these structures the roof, being supported by the sub-structure, does not afford ample strength to resist crushing strains exerted upon the end frame and hence the end frame will be crushed, unless powerfully braced. My improvement contemplates resisting these crushing strains, and to that end I provide strong braces which extend substantially to the top of the corner post, reinforcing the same, and, if desired, to intermediate points of the corner post, whereby the corner post, with its wide, inwardly extending flange, provides an efficient and substantial anti-telescoping construction whose rigidity is ample to resist the crushing in of the end framing.

It will be readily understood that minor changes in the form, size and construction may be made and substituted for those herein shown and described without departing

from the spirit of my invention, the scope of which is set forth in the appended claims.

I claim:

1. A reinforcing corner post for car bodies comprising a vertically disposed, flanged member adapted to engage the end framing at the corner of a car body, a horizontally disposed, flanged member extending inwardly from the lower portion of the vertically disposed member, which horizontally disposed member is adapted to engage the underframe of the car body, a brace between the vertically disposed and horizontally disposed members, and a shelf projecting outwardly from the lower portion of the vertically disposed member.

2. The combination with a car body and its end frame, of a reinforcing corner post applied to the end corner of the car body, which corner post comprises a vertically disposed, flanged member, a portion of which is adapted to be positioned between the car end frame and the car body, a horizontally disposed, flanged member at the lower end of said vertically disposed member, and means projecting from the lower portion of the vertically disposed member for supporting the car end frame.

3. The combination with a car body and its end frame, of a reinforcing corner post applied to the end corner of the car body, which corner post comprises a vertically disposed, flanged member, a portion of which is adapted to be positioned between the car end frame and the car body, a horizontally disposed, flanged member at the lower end of said vertically disposed member, means projecting from the lower portion of the vertically disposed member for supporting the car end frame, and a brace between the vertically disposed and horizontally disposed members.

4. The combination with a car body and its end frame, of a reinforcing corner post applied to the end corner of the car body, which corner post comprises a braced upright member a portion of which is adapted to be positioned between the end frame and the car body, and a shelf projecting outwardly from the lower portion of the corner post for supporting the car end frame.

5. The combination with a car body and its end frame, of a reinforcing corner post applied to the corner of the car body, an end frame support projecting from the lower end of said corner post, and a horizontally disposed, flanged member projecting inwardly from the lower portion of the corner post for engaging the car underframe.

6. A combined car body reinforcing corner post and car end frame support comprising a flanged upright, and an end frame support projecting outwardly from the lower portion of said post.

7. As a new article of manufacture, a combined car body reinforcing corner post and car end frame support comprising a braced, flanged upright adapted to be applied to the corner of the car body, and a car end frame support projecting outwardly from the lower portion of said flanged upright.

8. As a new article of manufacture, a combined car body reinforcing corner post and car end frame support comprising a flanged upright adapted to be applied to the corner of the car body, a horizontally disposed base member at the lower end of said upright, which base member is adapted to engage the underframe of the car body and a car end frame support projecting outwardly from the lower portion of said flanged upright.

9. The herein described anti-telescoping corner post for car bodies comprising an upright member having parts adapted to engage the side of the car body and the end framing thereof, an extension integral with the lower end of said corner post and extending forwardly therefrom, and a base

member integral with the lower end of the corner post, which base member extends rearwardly from the corner post and is adapted to engage the side of the car underframe.

10. The herein described anti-telescoping corner post for car bodies comprising an upright member having parts adapted to engage the side of the car body and the end framing thereof, an extension integral with and projecting forwardly from the lower end of said corner post, a base member integral with the lower end of the corner post and extending rearwardly therefrom for engaging the under frame of the car adjacent the corner of the body thereof, and braces between said base member and the corner post.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 26th day of April, 1911.

BOONE V. H. JOHNSON.

Witnesses:

M. P. SMITH,

BLANCHE L. CROWLEY.