No. 712,800. Patented Nov. 4, 1902.

R. H. HORNBROOK.

CAR BODY BOLSTER.

(Application filed June 23, 1902.

(No Model.)

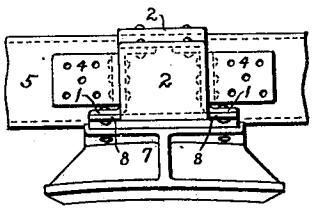


Fig. 4.

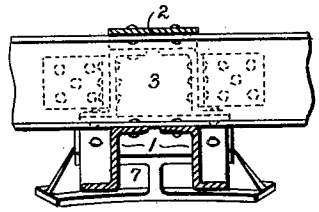


Fig. 5.

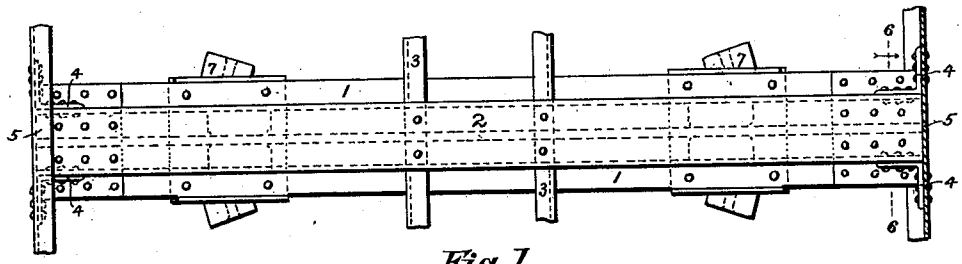


Fig. 1.

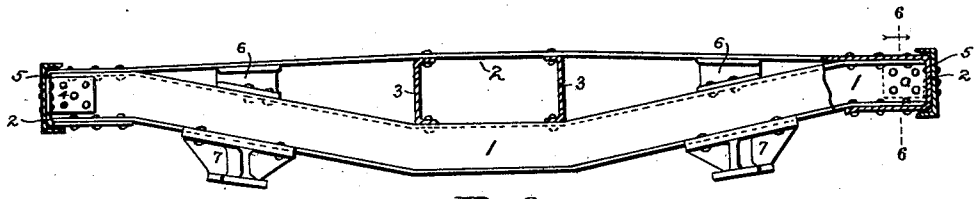


Fig. 2.

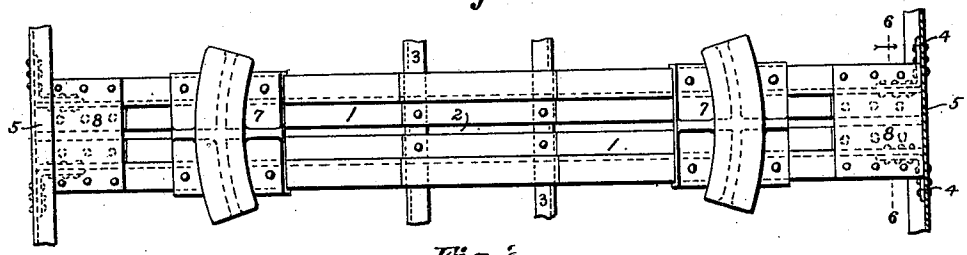


Fig. 3.

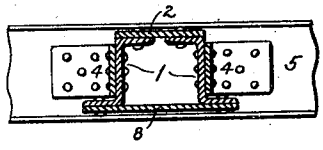


Fig. 6.

Witnesses;
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

RAYMOND H. HORNBROOK, OF CANTON, OHIO.

CAR-BODY BOLSTER.

SPECIFICATION forming part of Letters Patent No. 712,800, dated November 4, 1902.

Application filed June 23, 1902. Serial No. 112,818. (No model.)

To all whom it may concern:

Be it known that I, RAYMOND H. HORNBROOK, a subject of the King of Great Britain, residing at Canton, in the county of Stark and State of Ohio, have invented a new and useful Car-Body Bolster, of which the following is a specification.

My invention relates to a trussed bolster for car-bodies, and has for its objects a simple and efficient construction, with Z-bars for compression members, a plate for the tension member, the center sills of the car for separating the bars and the plate, and with the side sills of the car attached on the ends of the bolster, and an arrangement and connection of the several members which makes them absolutely rigid. I attain these objects by the construction and arrangement illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the bolster; Fig. 2, a side elevation showing one end in section; Fig. 3, an inverted plan view; Fig. 4, an end view with the car side sill removed; Fig. 5, a middle cross-section; and Fig. 6, a cross-section on line 6 6, Figs. 1, 2, and 3.

Similar numerals refer to similar parts throughout the drawings.

The bolster is composed of the Z-bar compression members 1, the plate tension member 2, which laps over the ends of the Z-bars, the car center sills 3, which separate the bars and the plate near the middle, together with the angle-plates 4 on either side at the ends, to which the car side sills 5 are attached, the cast bearing-blocks 6 for sustaining the side weight of the car, and the cast foot-plates 7 for tying the Z-bars together and for bearing on the truck-bolsters. The similar compression Z-bars 1 are located with their webs vertical, their upper flanges directed inward toward each other, and their lower flanges directed outward, respectively. The middle parts of the bars are preferably horizontal either way from the middle line to the outer sides of the respective center sills 3, whence they are bent to incline upward and outward to join the tension-plate 2 a little distance from the respective ends of the bolster, whence they are again bent to make the respective end parts horizontal. The foot-plates 7 are respectively riveted to the lower flanges of the Z-bars between the middle and the ends of the bolster and serve to tie and stay the bars together, and the bearing-blocks 6 are similarly respectively riveted to the upper flanges of the Z-bars above the foot-plates.

The car center sills 3 are preferably made of channel-bars, with their webs vertical and their lower flanges riveted to the upper flanges of the Z-bars, respectively.

The tension-plate 2 is made wide enough in the middle part to cover the faces of the upper flanges of the Z-bars as they are located in the bolster and is preferably horizontal either way from the middle line to the outer sides of the respective center sills 3, to the upper flanges of which it is riveted. Thence it is slightly bent and inclined downward and outward, resting on the bearing-blocks 6, respectively, to the junction with the upper flanges of the Z-bars near the respective ends of the bolsters, whence it is continued outward horizontally along these flanges to the respective ends of the Z-bars. Thence the tension-plate is bent down over the ends of the Z-bars and then inward along the lower flanges, respectively. The end parts 8 of the tension-plate which join the lower flanges of the Z-bars are made enough wider than the middle part to cover the faces of these flanges, and the plate is riveted on either side above to the upper flanges and below to the lower flanges, respectively, of the Z-bars. This construction ties the plate and the bars rigidly together.

The angle-plates 4 are riveted on the outer sides of the respective webs of the Z-bars at either end of the bolster, with their respective flanges flush with the ends of the bolsters and directed either way therefrom.

The side sills 5 are preferably made of channel-bars, and their webs are riveted to the flanges of the angle-plates, respectively.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A car-body bolster composed of Z-bar compression members, a plate tension member, and separating members near the middle between the bars and plate, said plate being bent around the respective ends of the Z-bars and riveted to the respective adjoining flanges thereof.

2. A car-body bolster composed of Z-bar

compression members, a plate tension member, and separating members near the middle between the bars and plate, said plate being increased in width at the ends and is bent around the respective ends of the Z-bars and is riveted to the respective adjoining flanges thereof.

3. A car-body bolster composed of Z-bar compression members, a plate tension member riveted at the respective ends to the adjoining flanges of the Z-bars, separating members near the middle between the bars and plate, and foot-plates riveted respectively to the free flanges of the Z-bars between the middle and the ends thereof.

4. A car-body bolster composed of Z-bar compression members, a plate tension member riveted at the respective ends to the adjoining flanges of the Z-bars, separating members near the middle between the bars and plate, foot-plates riveted respectively to the outer flanges of the Z-bars between the middle and the ends thereof, and bearing-blocks riveted respectively to the inner flanges of the Z-bars opposite the foot-plates and against the tension-plate.

5. A car-body bolster composed of Z-bar compression members, a plate tension member riveted at the respective ends to the adjoining flanges of the Z-bars, separating members near the middle between the bars and plate, angle-plates riveted on either side at the ends of the respective Z-bars, and car side sills riveted to the respective flanges of said angle-plates.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RAYMOND H. HORNBROOK.

Witnesses:
JOSEPH FREASE,
HARRY FREASE.