

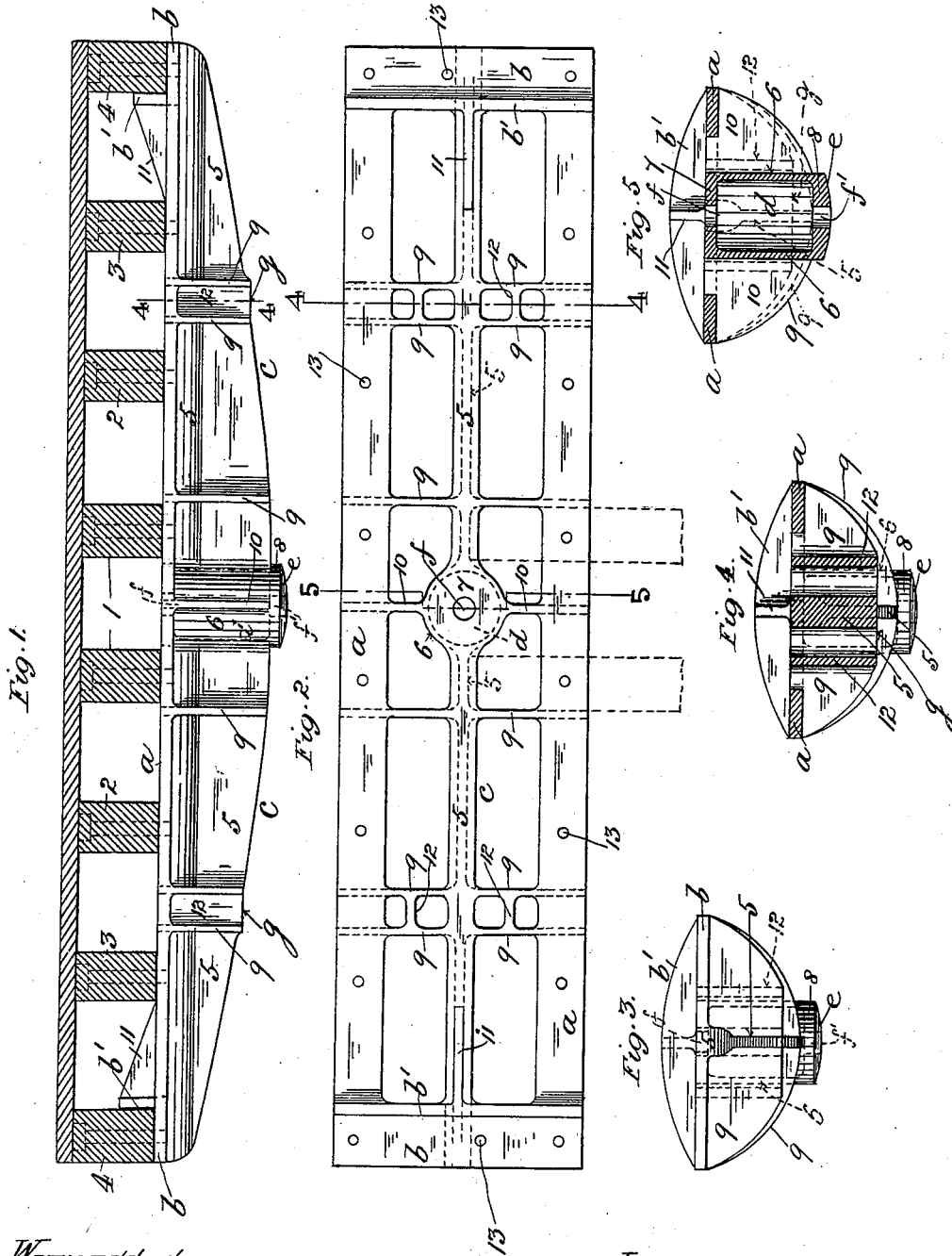
No. 645,672.

Patented Mar. 20, 1900.

**M. B. SCHAFFER.**  
**CAR BODY BOLSTER.**

(Application filed Dec. 26, 1899.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

MORSE B. SCHAFFER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE AMERICAN STEEL BODY DOUBLE BOLSTER COMPANY, OF SAME PLACE.

## CAR BODY-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 645,672, dated March 20, 1900.

Application filed December 26, 1899. Serial No. 741,590. (No model.)

*To all whom it may concern:*

Be it known that I, MORSE B. SCHAFFER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Car Body-Bolsters, of which the following is a specification.

This invention relates to an integral body-bolster for railroad-cars, and is an improvement on the body-bolster for which I obtained Letters Patent in the United States, dated June 6, 1899, No. 626,443, for an improvement in car-transoms.

The invention has for its object to increase the rigidity of the body-bolster and to reduce its weight.

It consists in features of novelty, as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 represents a transverse section through the sills of a railroad-car with my improved body-bolster, shown in side elevation, applied thereto; Fig. 2, a top plan of the body-bolster; Fig. 3, an end view thereof; Fig. 4, a transverse section through the body-bolster on line 4 4 in Figs. 1 and 2, and Fig. 5 a transverse section through the body-bolster on line 5 5 in Fig. 2.

Like letters and numerals of reference denote like parts in all the figures.

My improved body-bolster is composed of two horizontal side plates *a*, which are arranged transversely to the car at a suitable distance apart and bear against the under sides of the car-sills 1 2 3. The side plates *a* are united at their ends by plates *b*, which are at right angles to and in the same horizontal plane with the side plates *a* and bear against the under sides of the side sills 4, the plates *a* and *b* forming a rectangular-shaped frame which practically corresponds to the top plate or arch-bar of an ordinary car body-bolster. The end plates *b* are preferably formed at their inner edges with upwardly-projecting flanges *b'*, which bear, respectively, against the inner faces of the side sills 4.

Midway between the side top plates *a* and parallel thereto in a plane at right angles to the frame *a b* is a longitudinal web or tie 5, which is united at its ends to the end top

plates *b*. The web 5 may be of any desirable shape in cross-section, but preferably flat and of uniform thickness, except at its top portion, where it is preferably thickened at each side for a suitable distance downward, as shown. The top of the web 5 is alined to the top of the frame *a b* and bears against the under sides of the sills 1 2 3. The bottom edge of the web 5 may be of any desired configuration, but preferably convex, diminishing in depth from the middle to each end, where it passes beneath and unites with the corresponding end top plate *b'*. The web 5 midway between its ends is preferably divided by and unites with the surrounding wall 6 of a vertically-arranged cylindrical hollow portion or enlargement *d*, having top and bottom ends 7 and 8, respectively. The top end 7 is horizontal and flush with the top of the web 5, and the bottom end 8 projects somewhat below the bottom edge of the vertical web 5, the under side of this projecting portion being spherically shaped to form the center plate *e*, which engages with the truck-bolster in the usual well-known manner. Through the top and bottom ends 7 and 8 of the hollow portion *d* are formed the central vertical holes *f f'*, which are alined to each other for receiving the king-bolt. (Not shown.)

The web 5 is united to the side top plates *a* by vertical transverse webs 9, which intersect the longitudinal web 5 at right angles and are disposed along the same as shown or otherwise, as preferred. The webs 9 extend from the web 5 for its entire depth across the spaces between the web 5 and the side top plate *a* and beneath the latter, the outer edge of each web 9 being preferably convex between the outer edge of the said plate and the bottom edge of the web 5, as shown, or the outer edges of the webs 9 may be straight or of any other desired contour. Similar webs 10 unite the surrounding wall 6 of the hollow portion *d* to the side top plates *a*. Ribs 11 also unite the flanges *b'* of the end top plates *b* to the top of the girder *c*.

Between and equidistant from the central vertical hole *f f'* and each end of the body-bolster the webs 9 are preferably arranged at a short distance apart and are united to each

other, respectively, on each side of the web 5 by a vertical cross-web 12, the webs 12, with the thickened top portion of the web 5, extending the full depth of the webs 9, which are flattened or horizontal on their under sides thereat, as seen particularly in Fig. 4, and so form the side bearing *g* of the body-bolster, or the side bearings *g* may be otherwise formed in conjunction with the web 5 thereat, as found most suitable.

Through the side top plates *a* and end top plates *b* are formed holes 13 for receiving the bolts (not shown) by which the body-bolster is secured to the car-sills 1 2 3 4.

By this invention the maximum strength of the body-bolster is obtained with a minimum weight of material.

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

1. A car body-bolster comprising a rectangular-shaped frame having side and end plates arranged respectively at a suitable distance apart and united together in the same horizontal plane, and adapted at the top to bear against the under sides of the car-sills, vertical webs intersecting each other at right

angles and united at their ends to the side and end plates respectively, the said webs having the center plate and the side bearings on their under sides, all the said parts being integral throughout, substantially as described.

2. A car body-bolster comprising a rectangular-shaped frame having side and end plates arranged respectively at a suitable distance apart and united together in the same horizontal plane, and adapted at the top to bear against the under sides of the car-sills, vertical webs intersecting each other at right angles and united at their ends to the side and end plates respectively, the said webs having the side bearings on their under sides and having a hollow enlargement, the said enlargement having the center plate on its under side and perforated centrally there-through, all the said parts being integral throughout substantially as described.

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Witnesses:

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