

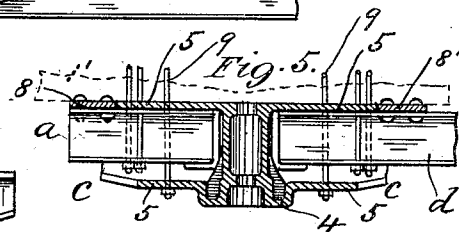
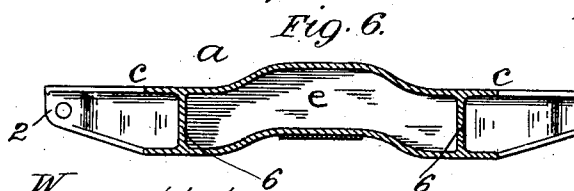
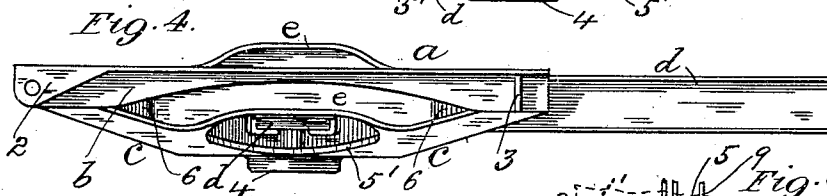
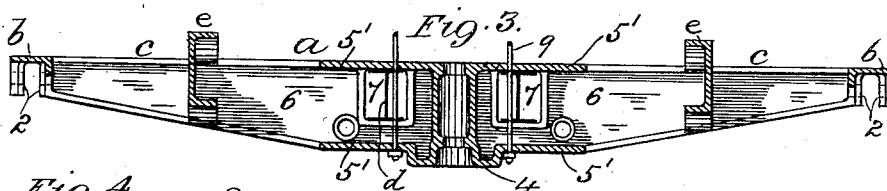
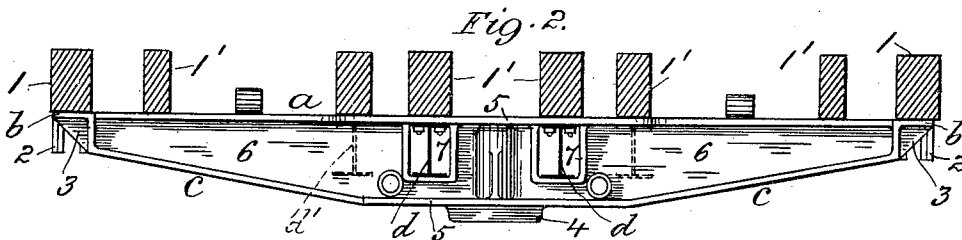
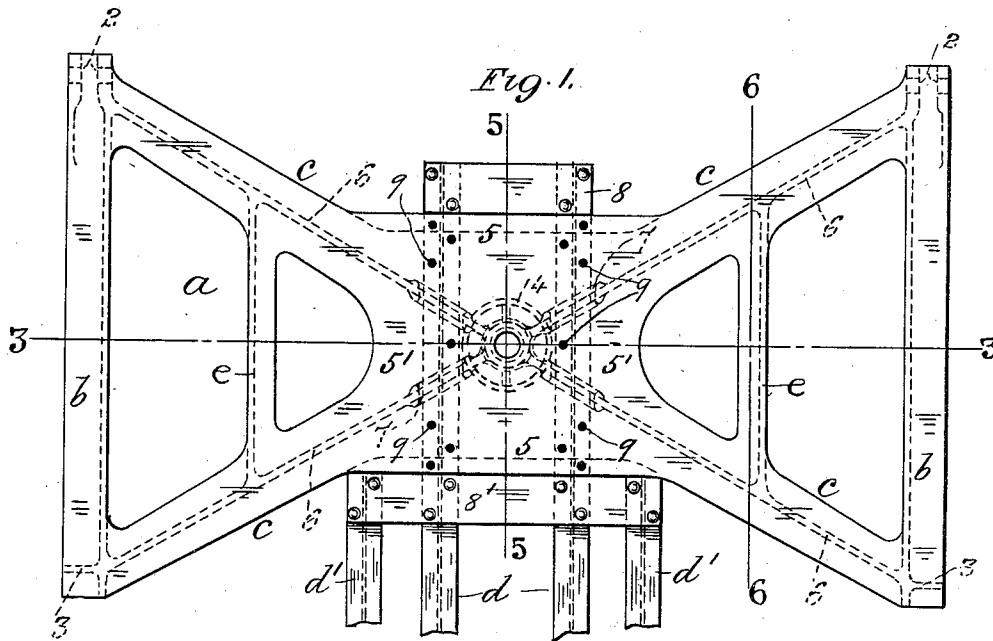
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PATENTED NOV. 13, 1906.

H. M. PFLAGER, C. T. WESTLAKE & C. H. HOWARD.

CAR BOLSTER.

APPLICATION FILED AUG. 30, 1906.



WITNESSES
O. T. Ledford.
H. M. Pfleger.

INVENTORS
Clarence H. Howard
Harry M. Pfleger
Charles T. Westlake
By Edward W. Funnell
their atty

UNITED STATES PATENT OFFICE.

HARRY M. PFLAGER, CHARLES T. WESTLAKE, AND CLARENCE H. HOWARD,
OF ST. LOUIS, MISSOURI, ASSIGNORS TO DOUBLE BODY BOLSTER COM-
PANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

CAR-BOLSTER.

No. 835,552.

Specification of Letters Patent.

Patented Nov. 13, 1906.

Application filed August 30, 1906. Serial No. 332,678.

To all whom it may concern:

Be it known that we, HARRY M. PFLAGER, CHARLES T. WESTLAKE, and CLARENCE H. HOWARD, citizens of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Car-Bolsters, of which the following is a specification.

Our invention relates particularly to that class of car double body-bolster which is composed of cast-steel integral throughout, and has for its object to produce a double body-bolster having its component members arranged in the most advantageous manner relatively to each other for insuring the greatest strength and rigidity of construction combined with compactness and economy of metal.

Ordinarily a double body-bolster of this class consists of a rectangular-shaped frame adapted to bear against the under side of the car-sills and comprising, mainly, two side and end members, respectively united to each other at their ends, and a middle member united at its end to the side members at right angles thereto and having the body center-bearing on its under side.

Our invention consists principally in substituting for the ordinary side members and middle member two diagonally-arranged members intersecting each other at the middle or pivotal central portion of the bolster, combined with other features of novelty, as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 is a top plan view of our improved double body-bolster; Fig. 2, a side elevation thereof; Fig. 3, a vertical longitudinal section through the bolster on line 3 3 in Fig. 1; Fig. 4, an end elevation thereof; and Figs. 5 and 6, vertical transverse sections there-through on lines 5 5 and 6 6, respectively, in Fig. 1 looking to the right.

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

a represents our improved double body-bolster, which is preferably composed of cast-steel integral throughout and consists of two parallel and opposite end members *b*, spaced a suitable distance apart and adapted at the top to bear longitudinally against the under side of the outer sills 1 of the car, to which

they are fixed by bolts (not shown) in the usual well-known manner. 55

The end members *b* may be of any suitable shape in cross-section and general configuration—such as L-shaped, as shown—having when assembled their horizontal legs bearing against the sills 1 and their upright legs arched, each member *b* being preferably formed at one end with two opposite longitudinally-arranged depending lugs 2, between which is coupled the end of the side body truss-rod (not shown) and near its other end (or at suitable intervals longitudinally) with a stiffening-rib 3. 65

The end members *b* are united to each other, preferably at or adjacent to their ends, by two diagonally-arranged members *c*, which are adapted to bear at the top against the under side of the longitudinal sills 1' of the car and intersect each other at the middle or pivotal central part of the bolster *a*, where the intersecting portion of the members *c* is perforated vertically for the king-bolt (not shown) and otherwise adapted to form the body center-bearing 4. 75

The diagonal members *c* in the present case are preferably I-shaped in cross-section and inclined (or curved) from their maximum depth at their middle and preferably straight portions to their junction with the end members *b*, or the members *c* may be otherwise shaped in cross-section and configuration, as found desirable. 85

The outer and inner top and bottom flanges of each I-shaped member *c* are united to the adjacent corresponding flanges of the other member *c* at their angles of intersection by gusset-shaped extended portions 5 and 5', the edges of the extended portions 5, which unite the outer flanges sidewise of the bolster *a*, being parallel to each other, respectively, at an equal distance from the longitudinal center line of the bolster *a*, while the extended portions 5' of the inner flanges (endwise of the bolster *a*) are preferably concave, the whole constituting a strong reinforcement to the flanges of the members *c* at their junction with each other and forming an extended bearing-surface therewith at the top against the car-sills 1'. 90 95 100

Transversely through the webs 6 of the diagonal members *c*, immediately beneath the extended portions 5 and 5' of their top flanges, 105

is formed on each side of the center-bearing 4 the usual opening (or openings) 7 for the passage therethrough of the middle platform-sills (preferably metallic, as shown) *d*, which bear against the under side of the said top portions 5 and 5', the inner ends of the platform-sills *d* projecting beyond the corresponding edge of the extended portion 5 at one side of the bolster *a* and bolted thereat to a cover-plate 8, which when the parts are assembled butts longitudinally edgewise against the said edge of the bolster *a*. Similarly, the outer projecting portions of the platform-sills *d* and *d'* are riveted to a cover-plate 8', which butts laterally edgewise against the corresponding edge of the extended portion 5, at the other side of the bolster *a*, whereby end play of the platform-sills *d* and *d'*, which are secured firmly to the bolster *a* by bolts 9, is prevented.

e represents the side bearings, which span and are preferably integral with the diagonal members *c* at a suitable distance from the center-bearing 4.

By this construction the load instead of being carried from the end members through the side members at right angles thereto and thence to the ordinary middle member and center-bearing is transmitted directly from the end members through the diagonal members *c* to the center-bearing 4, or, in other words, through the hypotenuse instead of the other two sides of a right-angled triangle, thereby insuring greater strength and rigidity and requiring less metal than the ordinary rectangular bolster.

Moreover, the diagonal members *c* being preferably united to the end members *b* at the ends of the latter, any blow from collision on a corner of the bolster *a* is resisted by these diagonally-arranged members *c* and breakage of the bolster *a* therefrom prevented.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A car-bolster, comprising two opposite parallel end members spaced a suitable distance apart and connected together by two diagonally-arranged members adapted therewith to bear at the top against the car-sills, the said diagonal members intersecting each other at the pivotal central portion of the

bolster and perforated thereat for the king-bolt, substantially as described.

2. A car-bolster, comprising two opposite parallel end members spaced a suitable distance apart and connected together by two diagonally-arranged members adapted therewith to bear at the top against the car-sills, the said diagonal members intersecting each other at the pivotal central portion of the bolster and adapted thereat to form the body center-bearing, substantially as described.

3. A car-bolster, comprising two diagonal members intersecting each other at their middle and adapted at the top to bear against the car-sills, the said members being connected to each other at, or adjacent to their ends by a suitable member therewith and parallel to the said sills, substantially as described.

4. In a car-bolster of the class described, the combination of two opposite parallel end members spaced a suitable distance apart, two members arranged diagonally and connected to the end members, and adapted therewith to bear at the top against the car-sills, the said diagonal members intersecting each other at the pivotal central portion of the bolster and having respectively, openings transversely through the body for the passage therethrough of the platform-sills, and flanges connecting the diagonal members gussetwise to each other at the top in their outer angles of intersection, the said flanges having their edges straight and parallel to each other at each side of the longitudinal center line of the bolster, substantially as described and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HARRY M. PFLAGER.
CHARLES T. WESTLAKE.
CLARENCE H. HOWARD.

Witnesses as to Harry M. Pflager and Charles T. Westlake:

JESSE T. FRIDAY,
EDWARD W. FURRELL.

Witnesses as to Clarence H. Howard:

ARTHUR T. MOREY,
EDWARD W. FURRELL.