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PATENTED JULY 3, 1906.

O. W. MEISSNER.
BODY BOLSTER FOR RAILWAY CARS.

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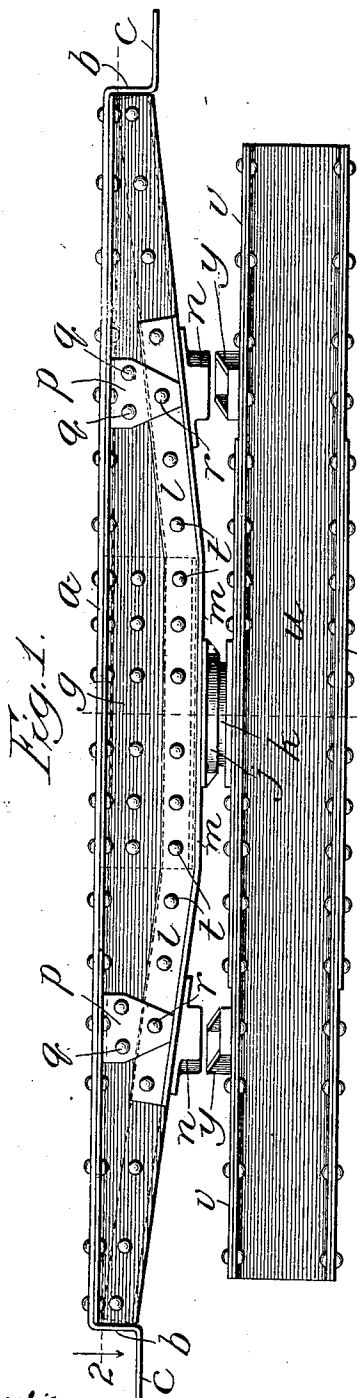


Fig. 1.

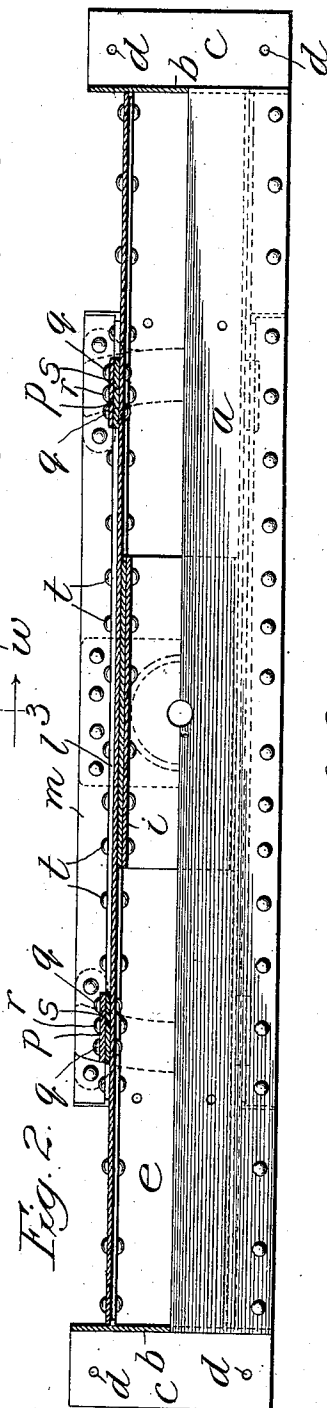


Fig. 2.

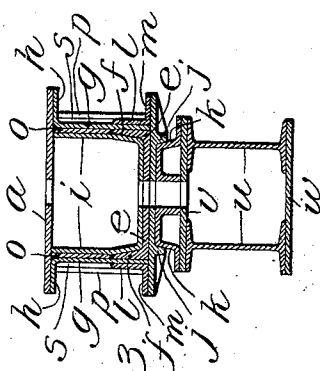


Fig. 3.

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BODY-BOLSTER FOR RAILWAY-CARS.

No. 824,802.

Specification of Letters Patent.

Patented July 3, 1906.

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To all whom it may concern:

Be it known that I, OTTO W. MEISSNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, am the inventor of certain new and useful Improvements in Body-Bolsters for Railway-Cars, of which the following is a specification.

My invention relates to that class of body-bolsters having an upper tension member, a lower compression member having upright or vertical flanges on each side thereof, and side members having upright web portions secured to such vertical flanges of the lower compression member and having lateral flanges at their upper edges secured to the upper tension member.

The principal object of my invention is to provide a simple, economical, and efficient body-bolster for railway-cars.

A further object is to provide a body-bolster for railway-cars having a lower compression member provided with integral upright flanges, side members having upright web portions secured thereto and having lateral flanges secured to the upper tension member, and suitable strengthening-pieces mounted on the outside of the side members, whereby the ordinary cast fillers on the inside of a bolster may be dispensed with and any breakage of strengthening-pieces readily repaired.

A further object is to provide a bolster having upper tension and lower compression members, the lower compression member being provided with integral flanges and inclined upwardly in the direction of the opposite ends of the bolster and secured to the upright side members, whereby a bolster having the maximum strength and minimum weight is provided.

Other and further objects of the invention will appear from an examination of the drawings and the following description and claims.

The invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a bolster constructed in accordance with my improvements, showing it mounted upon an ordinary truck-bolster; Fig. 2, a plan view with one side of the top plate or upper tension member removed, so as to show a sectional plan view of one side of the bolster, taken on line 2 of Fig. 1; and Fig.

3, a transverse sectional view in elevation taken on line 3 of Fig. 1 looking in the direction of the arrow.

In constructing a bolster in accordance with my improvements I provide an upper tension member *a*, formed of a flat steel plate having its ends bent down at an angle forming an upright end portion *b* and a horizontal end portion *c* for supporting the side sills, such horizontal end portion being provided with perforations *d* for containing bolts by means of which the side sills are secured.

A lower compression member *e* in the form of a rolled-steel channel-beam having a bottom central web portion and upright or vertical integral flanges *f* is provided, the opposite ends of such compression member being bent at points near the center, so as to extend upward and outward at an incline in the direction of the ends of the bolster.

Metallic side members *g*, which are L-shaped in cross-section and have their integral lateral flanges *h* in engagement with the top plate or upper tension member, are mounted on opposite sides of the lower compression member, having their lower upright or vertical web portions in engagement with the outer surfaces of the upright flanges of the lower compression member, to which they are secured. A central U-shaped filler *i*, of pressed steel, is mounted between such side members in engagement with the inner sides of the flanges of the lower compression member. The upper tension member, the central filler, and the lower compression member are perforated centrally to receive the king-bolt, and a center bearing *j* is similarly perforated and mounted upon the center bearing *k* of the truck-bolster.

Strengthening-pieces in the form of angle-irons having upright portions *l* and transversely-extending flange portions *m* are mounted with their upright portions in engagement with the upright web portions of the L-shaped side members and extend along the outside and lower edge thereof and upwardly at an incline longitudinally of the bolster from points near the longitudinal center of the bolster to points outside of the side bearings *n*, which are riveted to the laterally-extending flanges *m* of the lower strengthening-angles in engagement with the bottom plate or lower compression member.

Fillers *o* are mounted between the central

U-shaped fillers and the side members over the integral flanges of the lower compression member, and strengthening-plates *p* extend from the lateral flanges of the angle-irons to the top flanges formed by the side members and are riveted to the web portion of such side members by means of rivets *q* and to the angles and the integral flanges of the lower compression member by rivets *r*, suitable fillers *s* being mounted between such strengthening-pieces and the side members of the bolster.

A series of rivets *t* extend through the upright portion of the strengthening-angles, the lower upright web portion of the side members, the upright integral flanges of the lower compression member, and the upright side portion of the U-shaped filler and firmly secure such parts together.

The truck-bolster here shown is formed of side members in the shape of I-beams *u*, having a top plate *v* and bottom plate *w* secured thereto by means of rivets in the ordinary manner, such bolster being provided with side bearings *y*, all of which may be of any ordinary or known construction and form no part of this invention.

By the above arrangement it will be seen that a body-bolster is provided having no inside fillers of cast metal and, in fact, no fillers of any description on the inside thereof, except the pressed-steel U-shaped center filler. All of the strengthening-pieces, except such U-shaped central filler, being on the outside of the bolster, they may be readily inspected, replaced, or repaired. It will also be noted that the upright flanges of the lower compression member are integral with the central web portion thereof and that such compression member, with its integral flanges, extends upward in the direction of the ends of the bolster at an incline, so that its ends engage the upper tension member. This form of compression member, in combination with the other elements above described, forms a light bolster of great strength, with its reinforced and strongest parts extending in

the direction of the stresses to which it is subjected in use.

I claim—

1. In a body-bolster for railway-cars, the combination of a metallic upper tension member, a metallic lower compression member consisting of a web portion having integral upright flanges, side members provided with lateral flanges secured to such upper tension member, and a single U-shaped central filler extending inside of the upright flanges of such lower compression member and in engagement with the side members and lower member of the bolster.

2. In a body-bolster for railway-cars, the combination of an upper tension member, a lower compression member having a web portion and integral vertical flanges extending upwardly at an incline in the direction of the opposite ends of the bolster, side members having upper lateral flanges secured to such upper tension member and having lower upright web portions secured to the vertical integral flanges of the lower tension member, strengthening-angles mounted in engagement with such side members, and side bearings secured to such angle-irons.

3. In a body-bolster for railway-cars, the combination of an upper tension member, a lower compression member having a web portion and integral vertical flanges extending upwardly at an incline in the direction of the opposite ends of the bolster, side members having upper lateral flanges secured to such upper tension member and having lower upright web portions secured to the upright integral flanges of the lower tension member, strengthening-angles mounted in engagement with such side members, side bearings secured to such angle-irons, and strengthening-plates secured to such angles and side members over the side bearings upon the outside of the bolster.

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