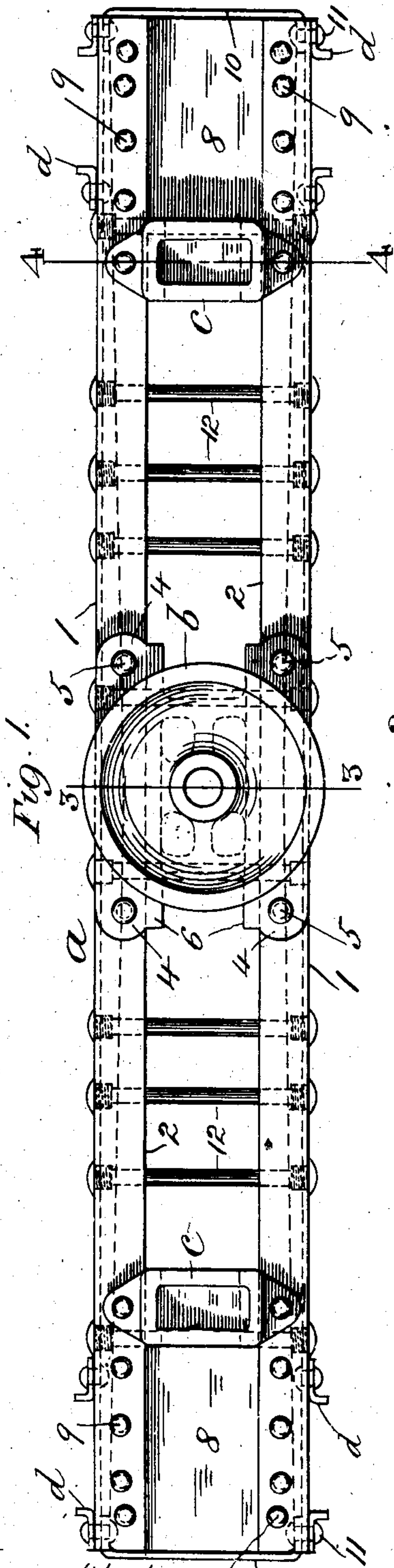


No. 834,248.

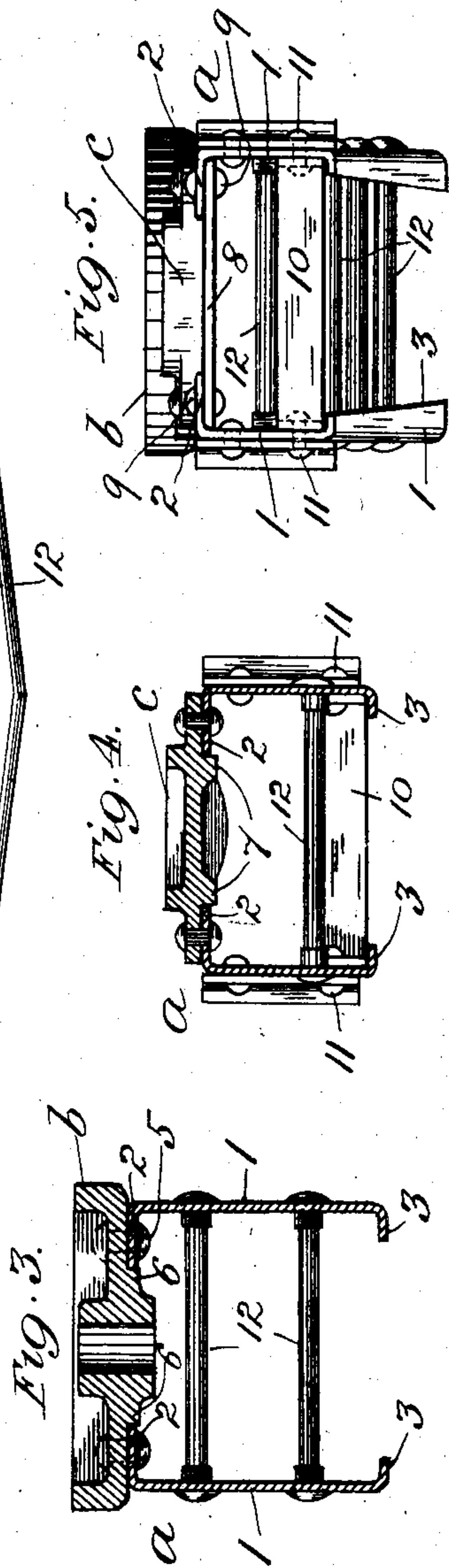
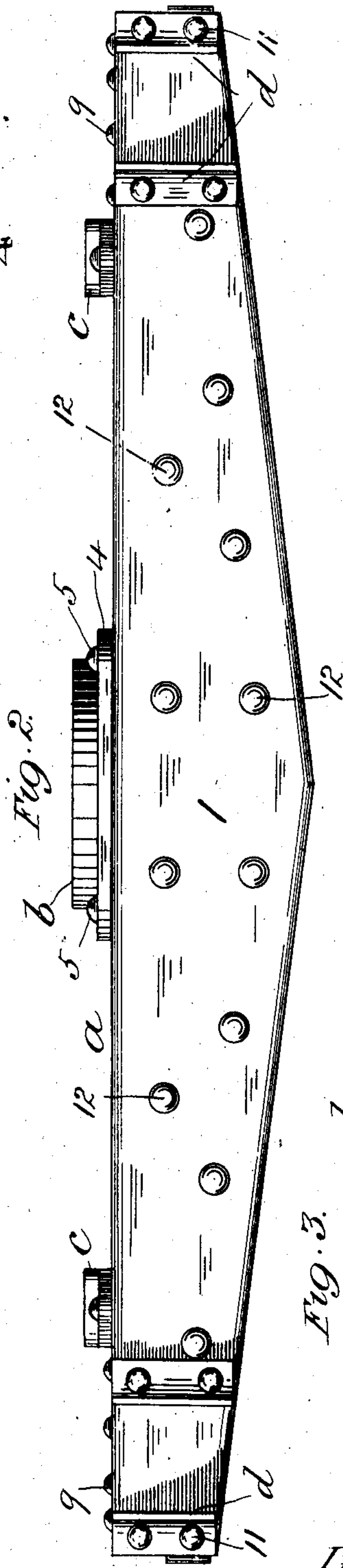
PATENTED OCT. 30, 1906.

J. B. BARNES.
CAR BOLSTER.

APPLICATION FILED AUG. 9, 1906.



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JOSHUA B. BARNES, OF SPRINGFIELD, ILLINOIS.

CAR-BOLSTER.

No. 834,248.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed August 9, 1906. Serial No. 329,896.

To all whom it may concern:

Be it known that I, JOSHUA B. BARNES, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Improvement in Car-Bolsters, of which the following is a specification.

My invention relates especially to a car-truck bolster in which the principal members are composed, preferably, of rolled-steel plate combined with reinforcing parts built up therewith to form a bolster of simple, light, strong, and inexpensive construction.

The invention 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 is a top plan view of my improved car-truck bolster; Fig. 2, a side elevation thereof; Figs. 3 and 4, vertical transverse sections through the bolster on lines 3 3 and 4 4, respectively, in Fig. 1; and Fig. 5, an end elevation of the bolster.

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

a represents my improved car-truck bolster, which consists of two upright side plates 1, composed, preferably, of rolled steel arranged opposite and preferably parallel to each other at a suitable distance apart and extending the entire length of the bolster *a*, the maximum depth or width of the side plates 1 being at the middle of the bolster *a* and thence preferably tapering or curving to their minimum depth at the ends, as shown.

Each side plate 1 is bent over or formed at the top for its entire length with a straight flange 2 and at the bottom preferably with a flange 3, having its maximum width at the middle of the bolster *a* and thence tapering to its minimum width at each end, the flanges 2 and 3 in the assembled position of the side plates 1 projecting inward toward each other, respectively, with their longitudinal edges spaced apart, as shown.

On the top flanges 2 at the middle of the bolster *a* is placed the truck center bearing *b*, composed, preferably, of cast-iron, (cast steel or other suitable metal,) which is perforated centrally for the king-bolt (not shown) and otherwise adapted to receive the body center bearing in the usual well-known manner, the bottom flanges (or base) 4 of the center bearing *b* extending therefrom toward each end of the bolster *a* and bearing on the

top flanges 2 of the side plates 1, respectively, to which they are fixed by rivets (or bolts) 5. Along the under side of the center bearing *b* and its flanges 4 are preferably formed two depending ribs or lugs 6, (or other suitable projection,) which when the center bearing *b* is in place project between and bear facially against the longitudinal edges of the top flanges 2, respectively, and thereby maintain the side plates 1 at the proper distance apart thereat and prevent shearing strain on the rivets 5. Similarly, the side bearings *c*, preferably composed of cast-iron, are formed on their under side with lugs 7, which project between and bear against the longitudinal edges of the top flanges 2 for maintaining the proper distance between the side plates 1.

Between the side plates 1 at and for a suitable distance from each end of the bolster *a* is arranged a horizontal plate 8, having its lateral edges preferably in contact with the side plates 1 and bearing at its top side against the under side of the top flanges 2, to which it is preferably fixed by rivets 9, the plate 8 being adapted on its under side as a seat or bearing for the bolster-springs and forming a strong intermediate connection and brace to the side plates 1. The side plates 1 are connected and braced together at each end of the bolster *a*, preferably immediately above the bottom flanges 3, by a flat metal bar 10, having its ends bent over at right angles and fixed thereat to the inside of the side plates 1 by rivets 11, which pass therethrough and preferably through one of the column-guides *d*, the latter preferably consisting of angle-pieces riveted to the side plates 1, respectively, as shown. Furthermore, the side plates 1 are preferably held apart and connected to each other for preventing buckling by transverse stay-bolts 12, which are arranged at suitable intervals along the same and preferably screw-threaded at their ends into the side plates 1, to which they are clenched externally by riveting, as shown, or ordinary bolts threaded at each end and tightened by nuts to the inside and outside of each plate 1 may be used, if preferred, or in lieu of stay-bolts such as described suitable metallic angle-iron or other shaped braces or struts may be interposed between the side plates 1, as found in practice to be most desirable.

By diminishing the width of the bottom flanges 3 of the side plates 1 toward the ends of the bolster *a* sufficient space is afforded

beneath the plates 8 between the longitudinal edges of the flanges 3 for the insertion of the bolster-springs between the side plates 1 thereat from below the bolster *a* on the inside of the end braces 10.

It is here noted that in lieu of forming the top and bottom flanges 2 and 3 of the side plates 1 integral with the body, as shown and described, they may be of angle-iron or otherwise and fixed to the side plates 1, or the bottom flanges 3 may be omitted, if desired.

By the above construction I obtain a simple, light, and strong bolster in which the parts are readily assembled and secured together in such a manner that the load is practically taken directly by the flanged side members and shearing strain on the rivets prevented.

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

1. In a car-bolster, the combination of two opposite upright side members spaced a suitable distance apart and having respectively an inside top flange, a horizontal member extending between the side members beneath the said flanges at and adjacent to each end of the bolster and adapted on its under side for the bolster-springs, a center bearing fixed on the said flanges and adapted to engage the longitudinal edges thereof, means for fixing the side members to each other and for fixing the horizontal members to the said flanges, substantially as described.

2. In a car-bolster, the combination of two opposite upright side plates, spaced a suitable distance apart and having respectively an inside top flange, a horizontal plate extending between the side plates beneath the said flanges at, and adjacent to each end of the bolster, and adapted on its under side for the bolster-springs, a center bearing fixed on the said flanges and adapted to engage the longitudinal edges thereof, means for fixing the side plates to each other and for fixing the horizontal plates to the said flanges, substantially as described.

3. In a car-bolster, the combination of two opposite upright side plates spaced a suitable distance apart and having respectively an inside top flange, a horizontal plate extending between the side plates beneath the said flanges at, and adjacent to each end of the bolster, and adapted on its under side for the bolster-springs, a center

bearing and side bearings fixed on the said flanges, the said side bearings being adapted to engage the longitudinal edges of the said flanges, means for fixing the side plates to each other, and for fixing the horizontal plates to the said flanges, substantially as described.

4. In a car-bolster, the combination of two opposite upright side plates spaced a suitable distance apart and having respectively an inside top flange, a horizontal plate extending between the side plates beneath the said flanges at, and adjacent to each end of the bolster, and adapted on its under side for the bolster-springs, a center bearing and side bearings fixed on the said flanges, means for fixing the side plates to each other, and for fixing the horizontal plates to the said flanges, substantially as described.

5. In a car-bolster, the combination of two opposite upright side plates spaced a suitable distance apart, and having respectively an inside top flange, a horizontal plate extending between the side plates beneath the said flanges at, and adjacent to each end of the bolster, and adapted on its under side for the bolster-springs, a center bearing and side bearings fixed on the said flanges and adapted to engage the longitudinal edges thereof, means for fixing the side plates to each other and for fixing the horizontal plates to the said flanges, substantially as described.

6. In a car-bolster, the combination of two opposite upright side plates spaced a suitable distance apart and having respectively an inside top and bottom flange, the said top flanges being straight, and the said bottom flanges tapering respectively from its maximum width at the middle to each end of the bolster, a horizontal plate extending between the side plates beneath the said top flanges at, and adjacent to each end of the bolster, and adapted on its under side for the bolster-springs, a center bearing and side bearings fixed on the said top flanges, and means for fixing the horizontal plates to the said top flanges, substantially as described.

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

JOSHUA B. BARNES.

Witnesses:

ALONZO B. MARS,
E. R. JEFFERY.