

J. B. BARNES.
CAR TRUCK BOLSTER.
APPLICATION FILED FEB. 1, 1906.

2 SHEETS—SHEET 1.

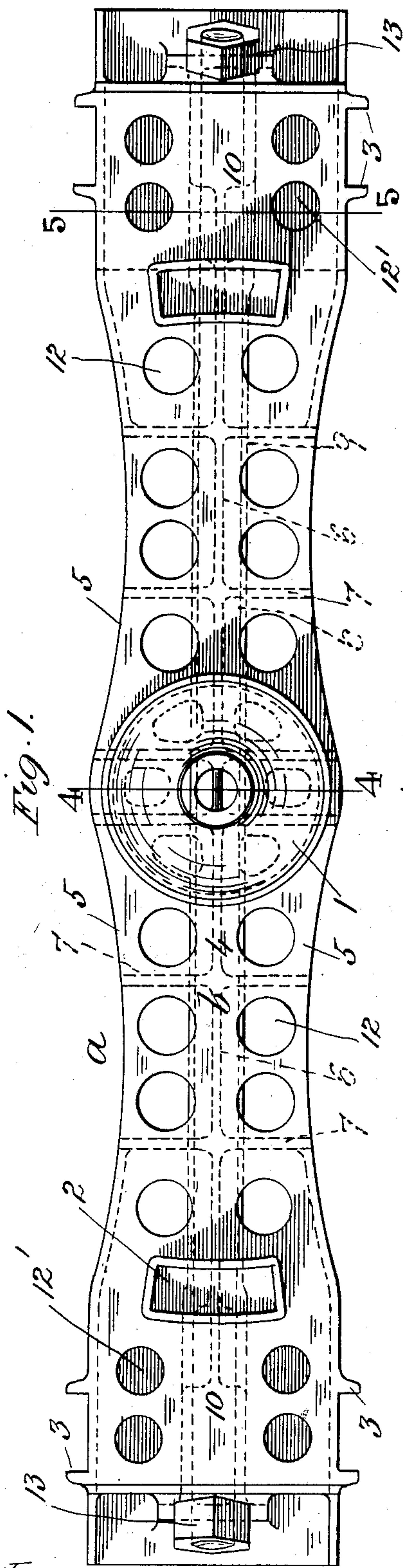


Fig. 1.

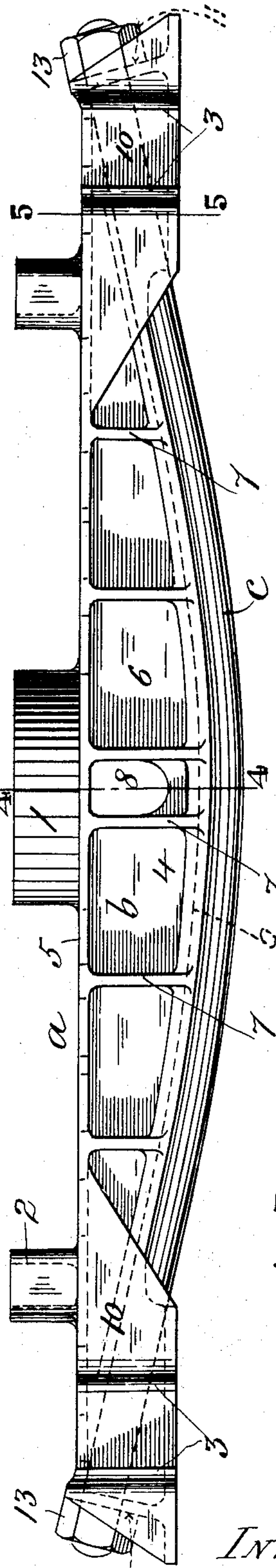
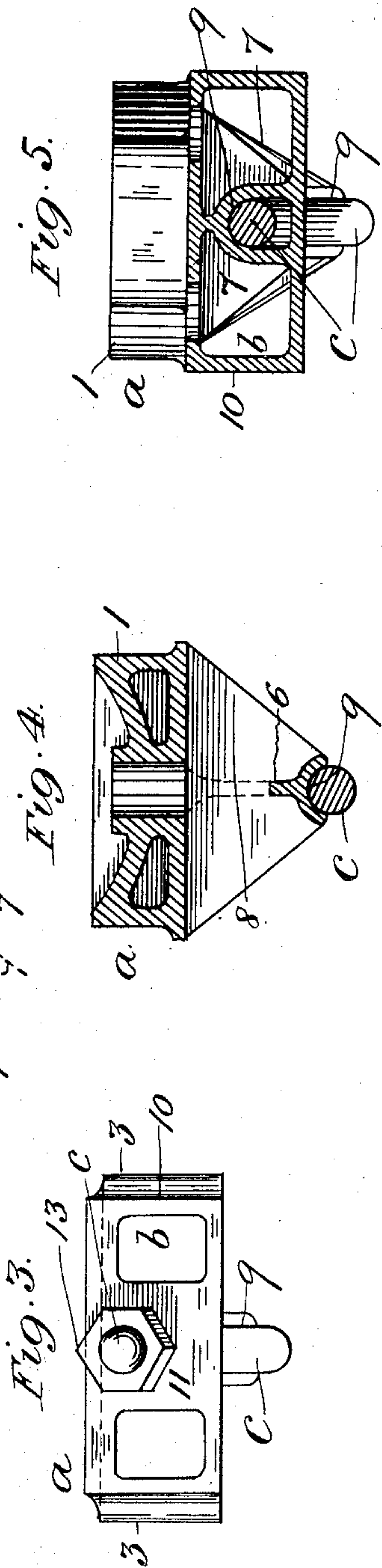


Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.



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Charles A. Hopwood.
J. M. Benson.

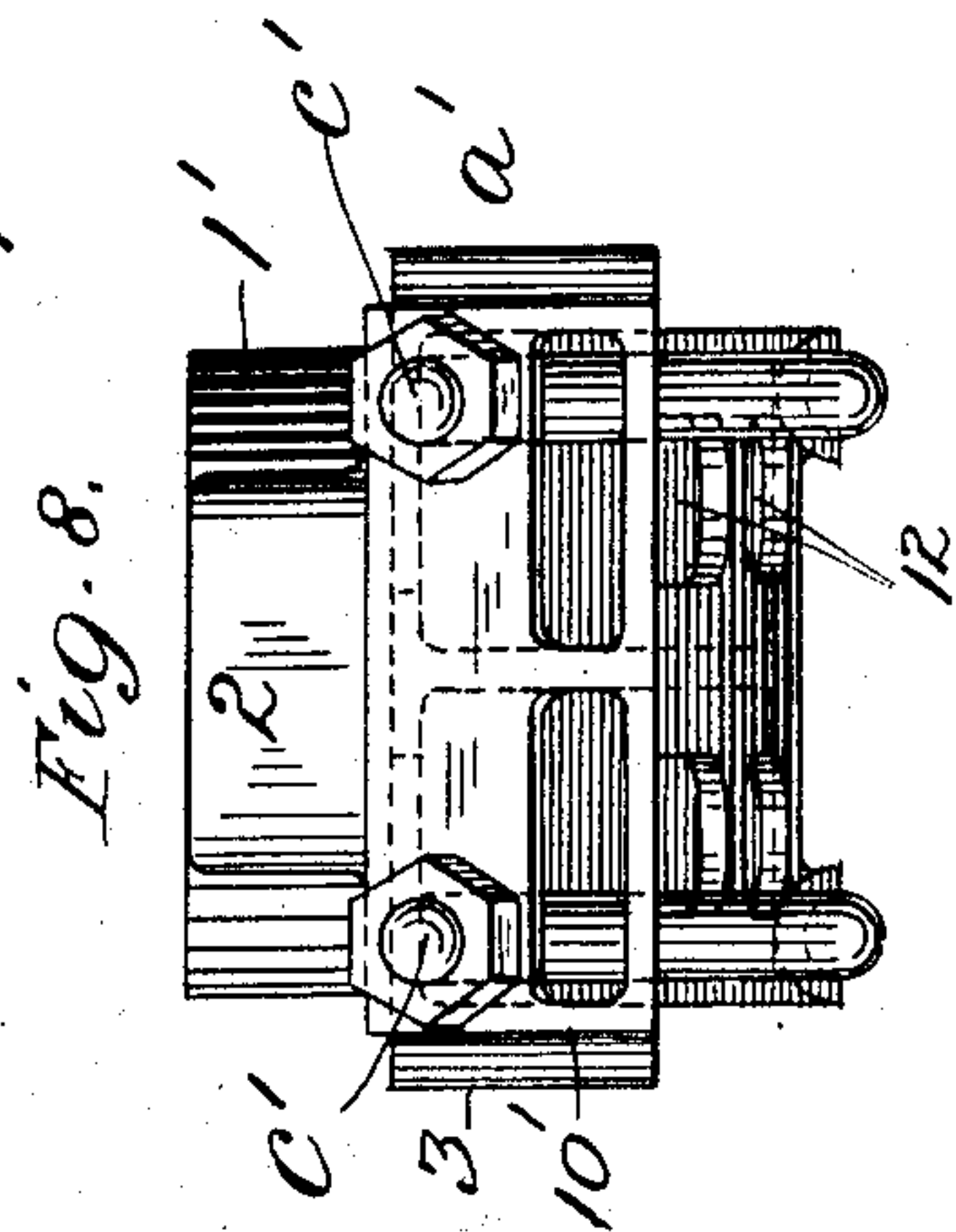
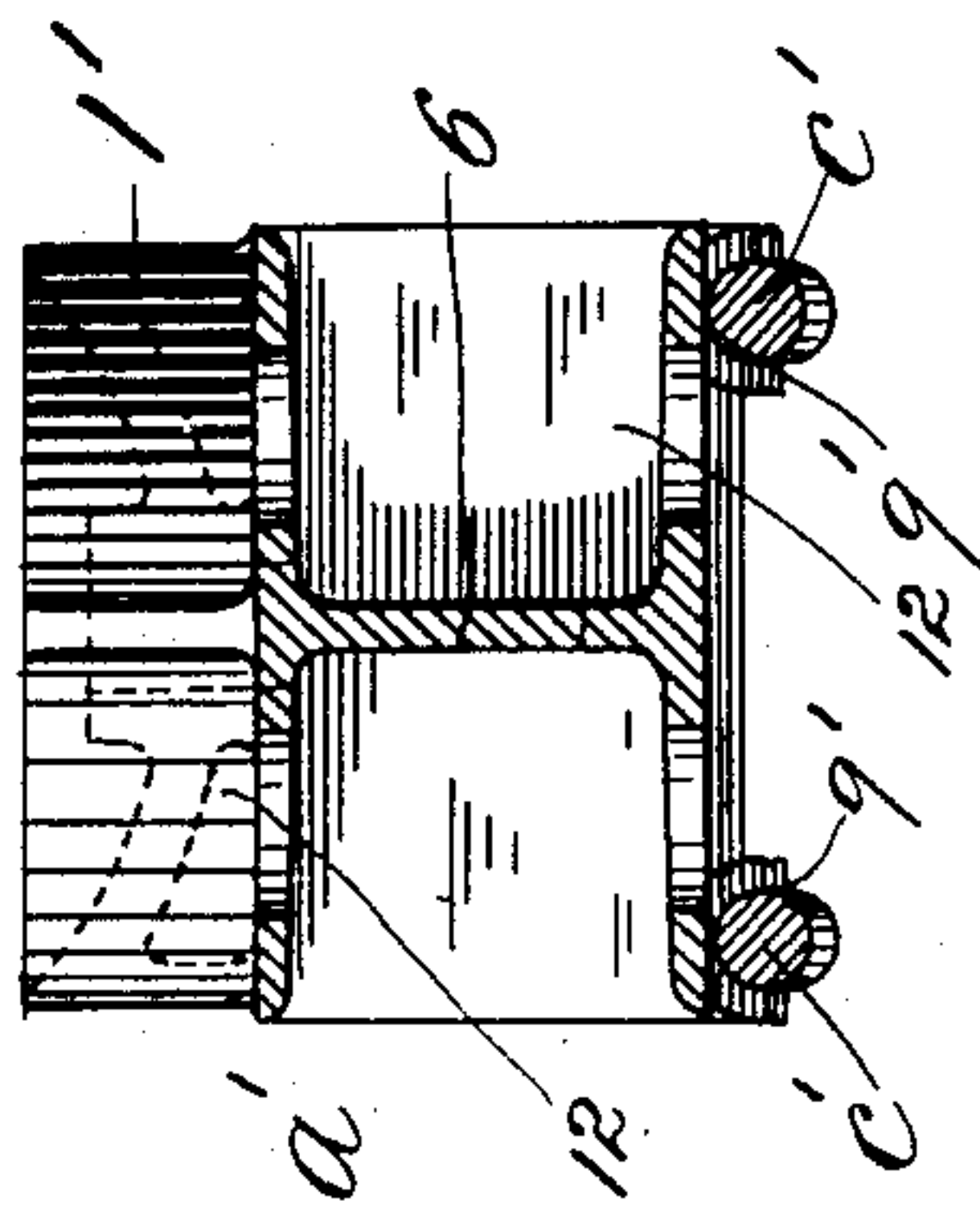
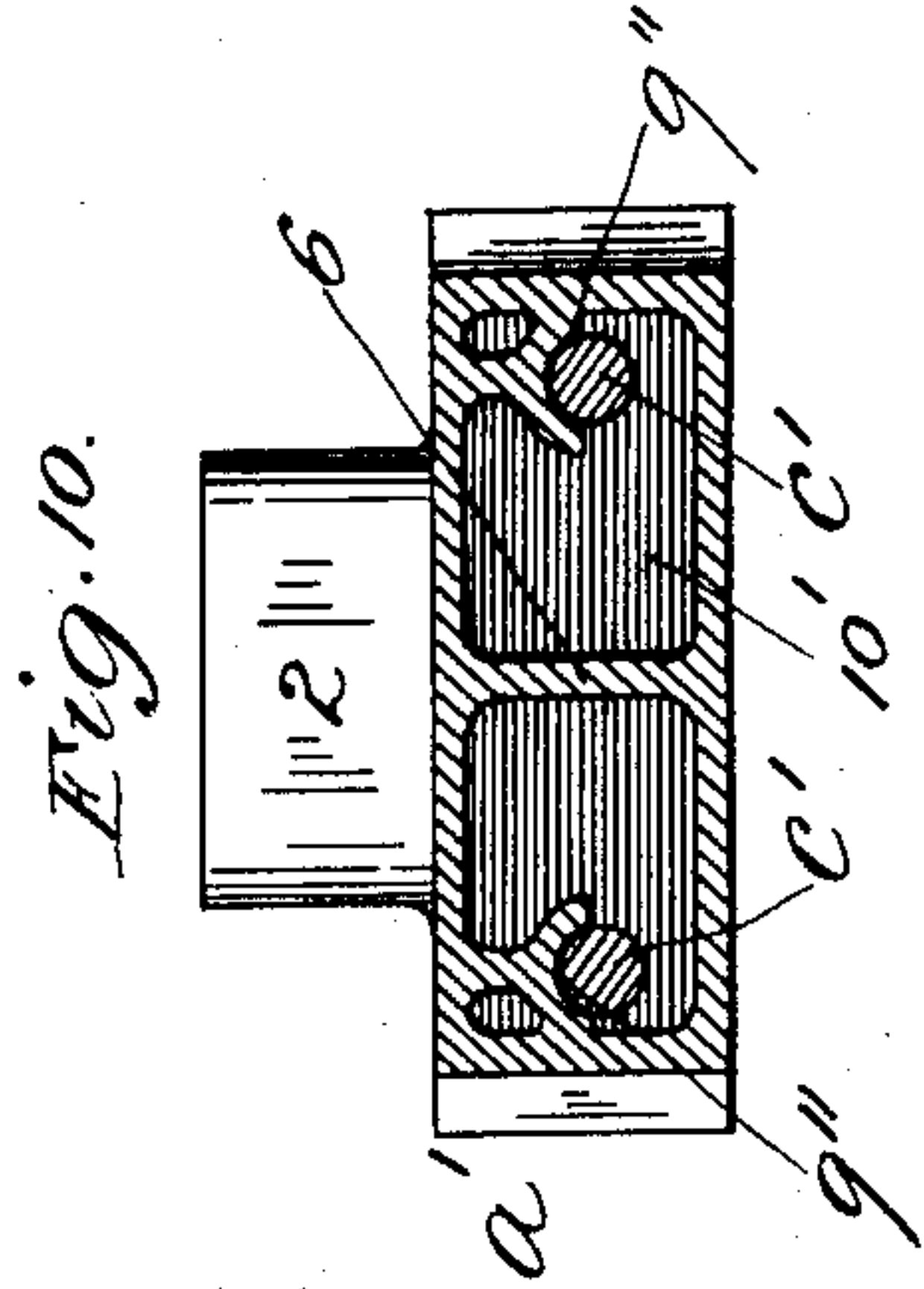
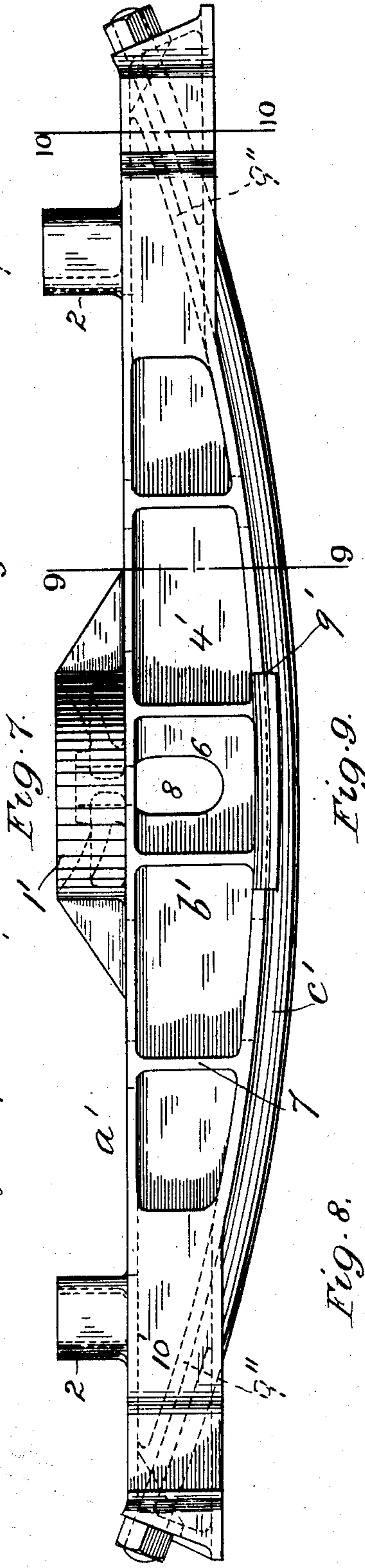
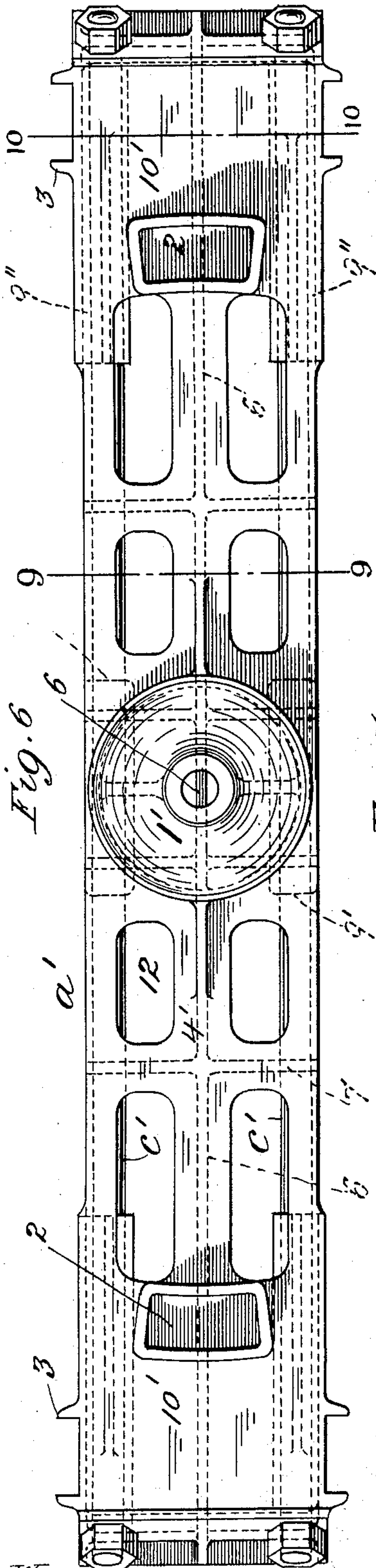
INVENTOR
Joshua B. Barnes
By Edward W. Furrell
His atty

No. 820,338.

PATENTED MAY 8, 1906.

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2 SHEETS—SHEET 2.



WITNESSES
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J. M. Rembow.

INVENTOR
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UNITED STATES PATENT OFFICE.

JOSHUA B. BARNES, OF SPRINGFIELD, ILLINOIS.

CAR-TRUCK BOLSTER.

No. 820,338.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed February 1, 1906. Serial No. 299,002.

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-Truck Bolsters, of which the following is a specification.

My invention relates to an improvement in that class of car-truck bolster which is ordinarily composed of cast-steel integral throughout, and has for its object to reduce weight and obtain a strong, rigid, and durable bolster.

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 a preferable construction of my improved car-truck bolster; Fig. 2, a side elevation thereof; Fig. 3, an end view of the same; Figs. 4 and 5, vertical transverse sections through the bolster on lines 4 4 and 5 5, respectively, in Figs. 1 and 2; Figs. 6, 7, and 8, corresponding views to Figs. 1, 2, and 3 of a modified form of the bolster; and Figs. 9 and 10, cross-sections thereof on lines 9 9 and 10 10, respectively, in Figs. 6 and 7.

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

Referring to Figs. 1 to 5, *a* represents my improved truck-bolster, having its body *b*, with the center plate 1, side bearings 2, and truck-column guide-lugs 3, composed, preferably, of cast-steel integral throughout. The middle portion 4 of the body *b* between the side bearings 2 is practically T-shaped in cross-section, having its top flanges 5 at right angles to the web 6 and united thereto for its entire depth by upright ribs 7, which are arranged transversely to the body *b* at suitable intervals along the middle portion 4, the two middle ribs 7 being preferably located beneath the center plate 1, one on each side of and at an equal distance from its center. Transversely through the web 6 between the middle ribs 7 and immediately beneath the center plate 1 is an opening 8 for the lower projecting end of the king-bolt, (not shown,) which passes through the center plate 1 thereat. The web 6 is formed at the bottom or under side of the body *b*, which is preferably convex longitudinally with a channel or groove 9, which is circular-shaped in cross-section and extends the entire length of the

bolster *a*, its end portions passing through and uniting with the end portions 10 of the body *b*, which are preferably box-shaped in cross-section and adapted on their under sides for the spring-seats in the usual manner. The top and bottom walls of each end portion 10 at each end of the body *b* are united to each other in the middle by a web 11, which is inclined outward from the top wall at right angles to the tangent of the adjacent end of the longitudinally-curved channel 9. Through the top flanges 5 of the middle portion 4 and top walls of the end portions 10, with which they are flush, are formed lightening-holes 12 12', respectively, arranged as shown or in any other desired manner, the outer configuration of the flanges 5 being preferably concave from their greatest width at the center plate 1 to their junction with the said walls, as shown. In and along the channel 9 is placed and laterally held thereby a circular truss bar or bolt *c*, of rolled iron or steel, which extends the entire length of the body *b* and through a hole therefor formed through the end web 11 of each end portion 10, the externally-projecting portion of the bar *c* being screw-threaded and having a nut 13, so that on turning the nuts 13 against the webs 11 the bar *c* is tightened and bears closely against the bottom or bed of the channel 9 for its entire length, thereby forming a strong auxiliary tension member to the bolster *a* and enabling the cross-sectional area of the cast-steel body portion *b* to be reduced from that necessary when the bolster is made entirely of cast metal, or, in other words, by combining a rolled-iron truss-bar bearing against the under side of the cast body in the manner described a lighter bolster is obtained without loss of strength and rigidity.

In the modification of the bolster *a'* seen in Figs. 6 to 10 two truss-bars *c'* are used in lieu of one, as before described, in which case the middle portion 4' of the body *b'* is preferably I-shaped in cross-section and the bottom channels 9' formed only part way along the under side of the bottom flanges at the outer edges thereof and preferably beneath the center plate 1', similar channels 9'' being formed for the bars *c'* through the end portions 10' of the body *b'* adjacent to their side walls, as shown, the bars *c'* bearing throughout against the under side of the body *b'*, which is substantially similar in principle and construction to the body *b*, previously described.

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

1. A car-bolster, comprising a cast-steel body having the center plate, side bearings, and spring-seats integral therewith, and having a channel formed in its under side, a truss-bar adapted to bear within the channel against the said body for its entire length, and projecting through each end thereof, and means for securing and tightening the truss-bar to the said body, substantially as described.

2. A car-bolster, comprising a cast-steel body, having the center plate, side bearings, and spring-seats integral therewith, and having a channel formed in its under side, the middle and end portions of the said body be-

ing T-shaped and box-shaped respectively, in cross-section, upright ribs between, and integral with the top flanges and web of the said middle portion, a truss-bar adapted to bear within the channel against the said body for its entire length, and projecting through each end thereof, and means for securing and tightening the truss-bar to the said body, 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:

ELIZABETH C. TOUHEY,
EDWARD W. FURRELL.