

No. 762,286.

PATENTED JUNE 14, 1904.

S. A. CRONE.  
BOLSTER OR OTHER BEAM FOR CAR TRUCKS.

APPLICATION FILED NOV. 24, 1903.

NO MODEL.

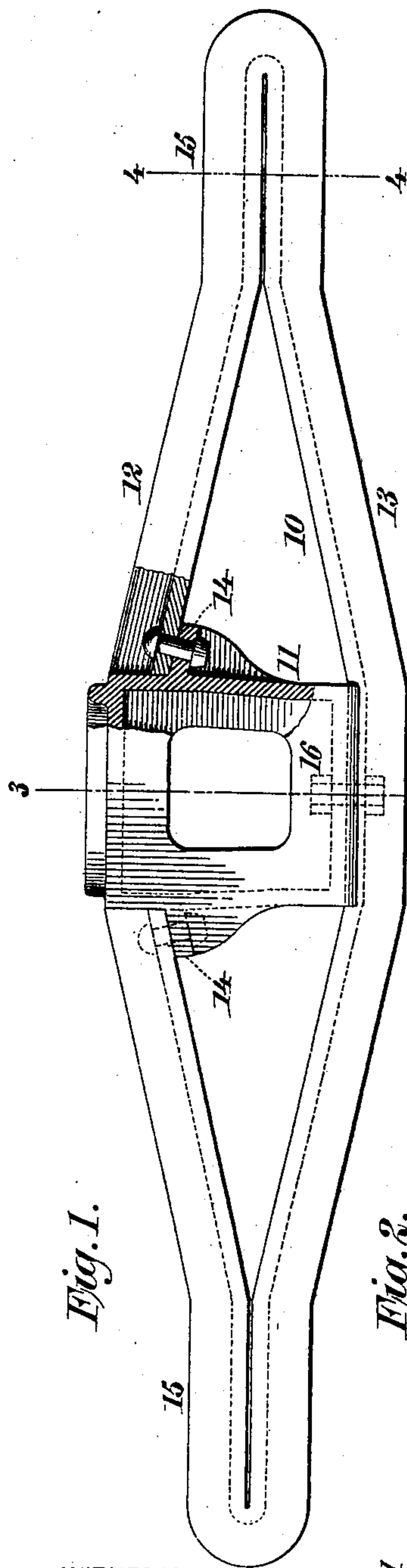


Fig. 1.

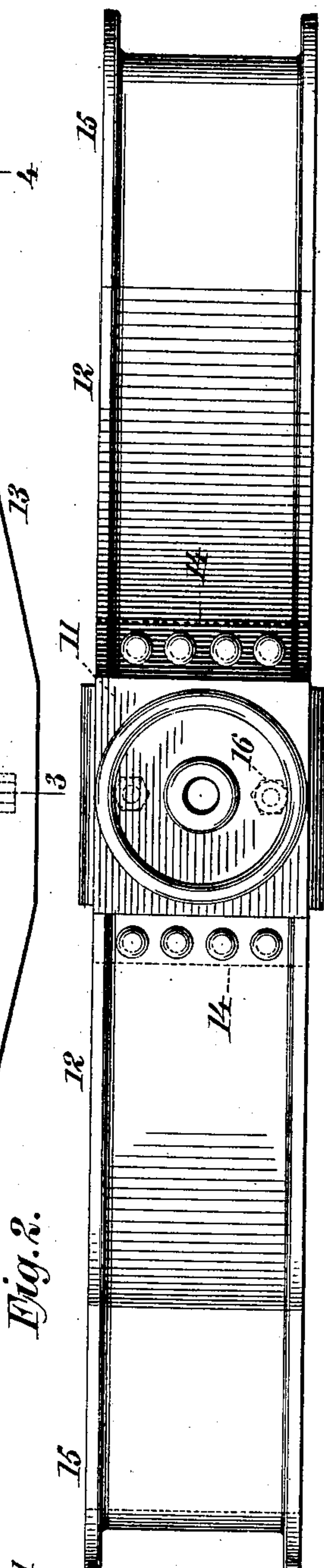


Fig. 2.

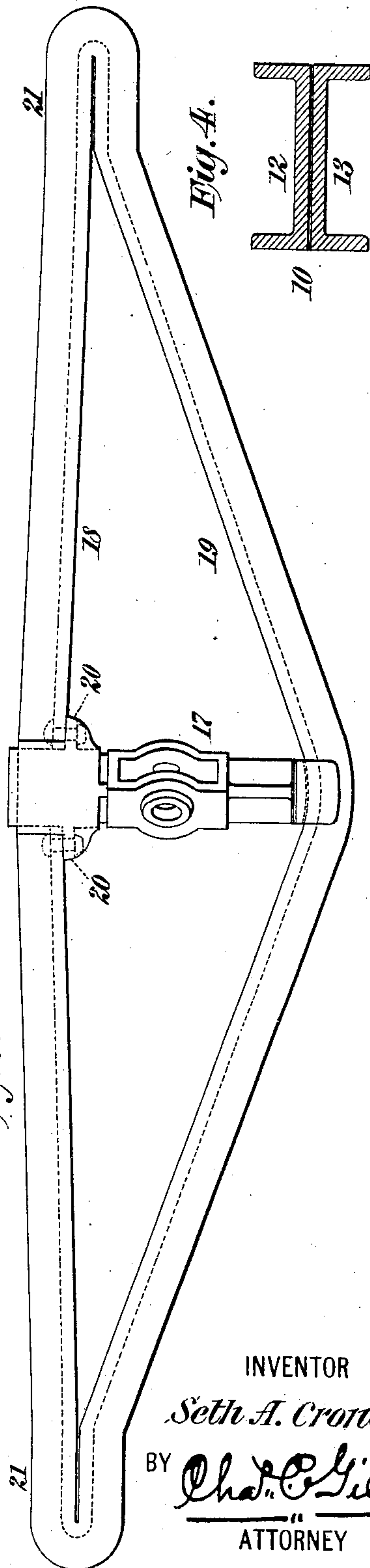


Fig. 5.

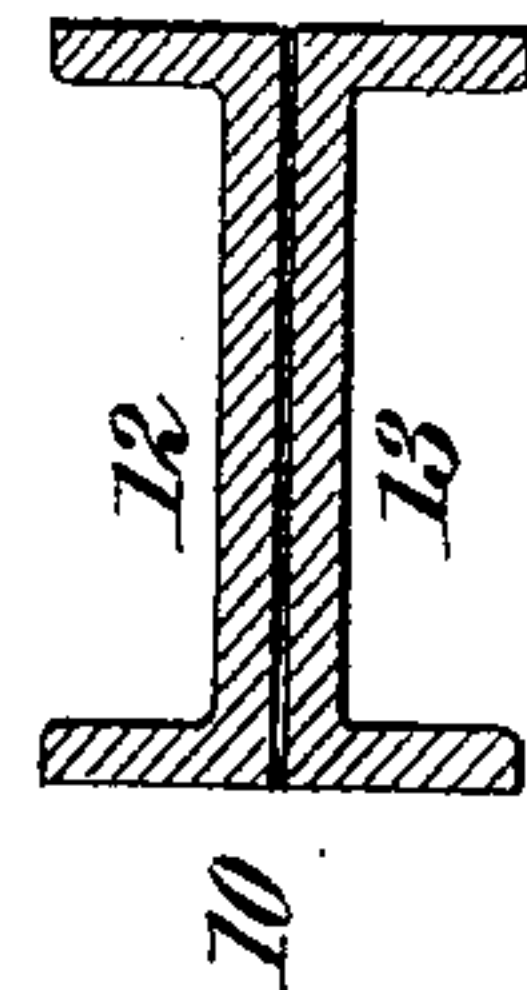
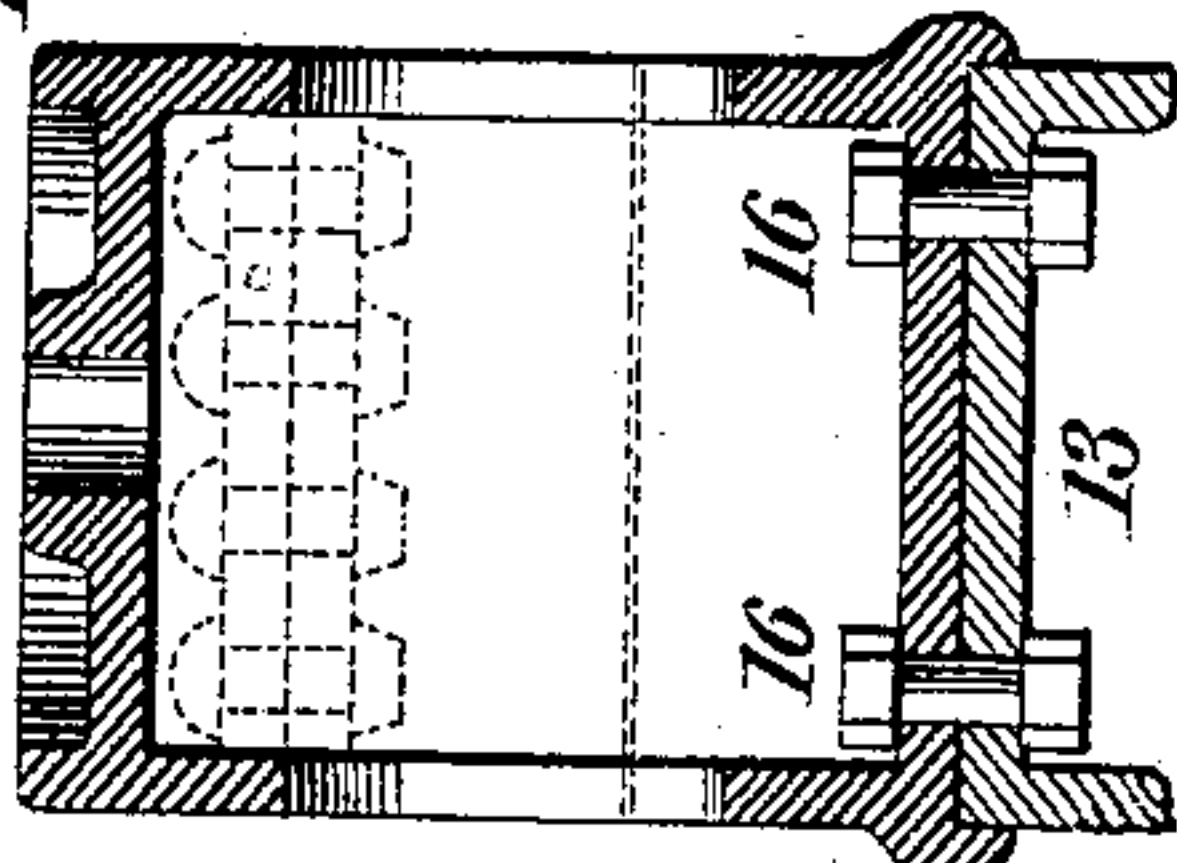


Fig. 4.

WITNESSES:

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Fig. 3.



INVENTOR

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# UNITED STATES PATENT OFFICE.

SETH A. CRONE, OF NEW YORK, N. Y.

## BOLSTER OR OTHER BEAM FOR CAR-TRUCKS.

SPECIFICATION forming part of Letters Patent No. 762,286, dated June 14, 1904.

Application filed November 24, 1903. Serial No. 182,463. (No model.)

*To all whom it may concern:*

Be it known that I, SETH A. CRONE, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Bolster or other Beams for Car-Trucks, of which the following is a specification.

The invention relates to improvements in bolster and other beams for car-trucks; and it consists in the novel features hereinafter described and claimed.

My invention pertains more especially to a novel construction of trussed beams embracing compression and tension members and a central strut, the beam proper being in one integral bar of metal bent to the required outline and secured at its ends to one end of the strut, the other end of the latter engaging the middle of the trussed portion of the beam; and the object of the invention is to provide beams of the character referred to of increased efficiency and durability, and at the same time to avoid complications of parts, unnecessary weights, and the usual riveting together of the parts commonly comprised in bolster and other beams.

The invention is especially applicable to truck-bolsters and brake-beams; and the invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, partly broken away and partly in section, of a truck-bolster constructed in accordance with and embodying my invention. Fig. 2 is a top view of same. Fig. 3 is a vertical transverse section of same on the dotted line 3 3 of Fig. 1. Fig. 4 is a like section of same on the dotted line 4 4 of Fig. 1, and Fig. 5 is a top view of a brake-beam embodying my invention.

In Figs. 1 to 4, inclusive, I present the preferred form of the invention when the same is embodied in a truck-bolster, and in said figures 10 designates the bolster-beam proper, and 11 the central strut, whose upper surface affords a center bearing and is vertically apertured to receive the usual king-bolt. The bolster-beam 10 is formed from one continu-

ous piece of rolled channel-beam bent to form the members 12 13 and having its ends in abutting relation to the strut 11 and securely riveted to the flanges 14, constituting a portion of said strut, as clearly illustrated. The members 12 13 define an outline of diamond shape, except at their end portions 15, where said members are substantially parallel with each other, so that they may appropriately be caused to engage the usual supports provided in car-trucks for the ends of bolster-beams. The ends of the channel-beam engage the upper portion of the strut 11, and the lower portion of said strut engages the upper surfaces of the member 13 of the bolster-beam and is thereto secured by means of bolts 16, as more clearly represented in Fig. 3. The strut 11 is in the form of a rectangular casting, and while this is a desirable form of construction for the strut 11 it is obvious that the present invention is not limited to any special detailed form of construction of said strut. The beam 10 is, as shown, in one integral piece of metal, and one of the purposes of thus constructing the said beam 10 is to avoid the employment of rivets and bolts at the outer ends of said beam and to cause the strains exerted upon the compression member 12 to be resisted by the strut 11 and the outer ends of the member 13. If, for illustration, the members 12 13 were in separate pieces riveted together at the end portions 15 of the beam, the strains exerted upon the compression member 12 would have a tendency to sever the rivets securing said members together, thereby impairing the utility of the bolster, and it is to prevent any such result that I form the bolster-beam in one integral piece of rolled metal bent into the required shape and having its free ends secured adjacent to the vertical center of the bolster to the strut 11, which is intermediate the compression and tension members 12 13 and secured to both thereof. In Fig. 1 I illustrate the end portions 15 of the bolster as being formed by bringing the web portions of the members 12 13 close together; but it is not essential that these web portions should contact with each other, and they may be separated by a space greater than that illustrated



in the drawings, so that the channel-beam may not at the ends of the bolster be given the sharp bend illustrated, this being a detail which will vary in accordance with the will of the manufacturer. It is to be understood, however, that at the end portions of the beam the webs of the two members of the latter are to be brought into near relation to each other, as shown, since thereby the beam is very much improved in efficiency. The flanges of the rolled channel of which the beam is made extend outwardly, and hence the webs of the tension and compression members may be brought into near relation to each other at the end portions of the completed beam, as shown.

The brake-beam shown in Fig. 5 comprises a central strut 17 and beam members 18 19, the said members being formed in one integral piece from a rolled channel-beam bent to the required form and having its two ends brought into abutting relation with the head of the strut 17 and securely riveted to flanges 20, formed on said head in the manner above explained with relation to the structure shown in Figs. 1, 2, and 3. The members 18 19 of the brake-beam are engaged at their inner facing sides at their central portion by the strut 17, and the latter is of suitable form to receive the usual brake-lever. (Not shown.) The end portions of the members 18 19 are brought into close relation to each other, as denoted at 21 21, for, in addition to other reasons, convenience in applying the brake-heads (not shown) upon the ends of the brake-beam.

The bolster-beam and brake-beam correspond with each other in that each is formed from one continuous rolled beam bent to shape and having its opposing members at their central portions separated by a central strut engaging both of said members. In forming the bolster-beam I prefer that the members 12 13 thereof shall have corresponding outlines and shall converge toward the ends of the bolster, while in the construction of the brake-beam it is desirable that the member 18 thereof shall be slightly bowed and that the member 19 shall be given such form that it may constitute a substantial truss and correspond in the general outline with the form of trussed rods at present employed in brake-beams.

I prefer that the beam employed in the construction of both the bolster and brake-beam

shall be of channel shape in cross-section; but I desire not to limit my invention to the shape of the beam, since it is obvious that many of the advantages of my invention may be attained if, for illustration, a portion of the flanges of the beam were removed, thus breaking the continuity of the channel shape.

The bolster shown in Figs. 1 and 2 is a truck-bolster; but it is obvious that the same bolster may be turned upside down and with slight changes in outline converted into a body bolster for a car.

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

1. The beam hereinbefore described comprising the longitudinal opposing members and central strut, the said members being in one continuous piece of rolled flanged metal beam bent to shape and having its ends in abutting relation to said strut and secured thereto, the latter having its end intermediate said ends of said beam, and the flanges of said beam being turned outwardly; substantially as set forth.

2. The beam hereinbefore described comprising the longitudinal opposing members and central strut, the said members being in one continuous piece of rolled flanged metal beam bent to shape and having its ends in abutting relation to said strut and secured thereto, the latter having its end intermediate said ends of said beam and provided with the outwardly-extending flanges upon which said ends are riveted, and the flanges of said beam being turned outwardly; substantially as set forth.

3. The beam hereinbefore described comprising the longitudinal opposing members and central strut, the said members being in one integral piece of rolled flanged metal bent to shape and having its ends each independently secured to said strut, and said members at the end portions of the beam having their webs substantially parallel with and in near relation to each other, and the flanges of said beam being turned outwardly; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 21st day of November, A. D. 1903.

SETH A. CRONE.

Witnesses:

ARTHUR MARION,  
CHAS. C. GILL.