

No. 685,453.

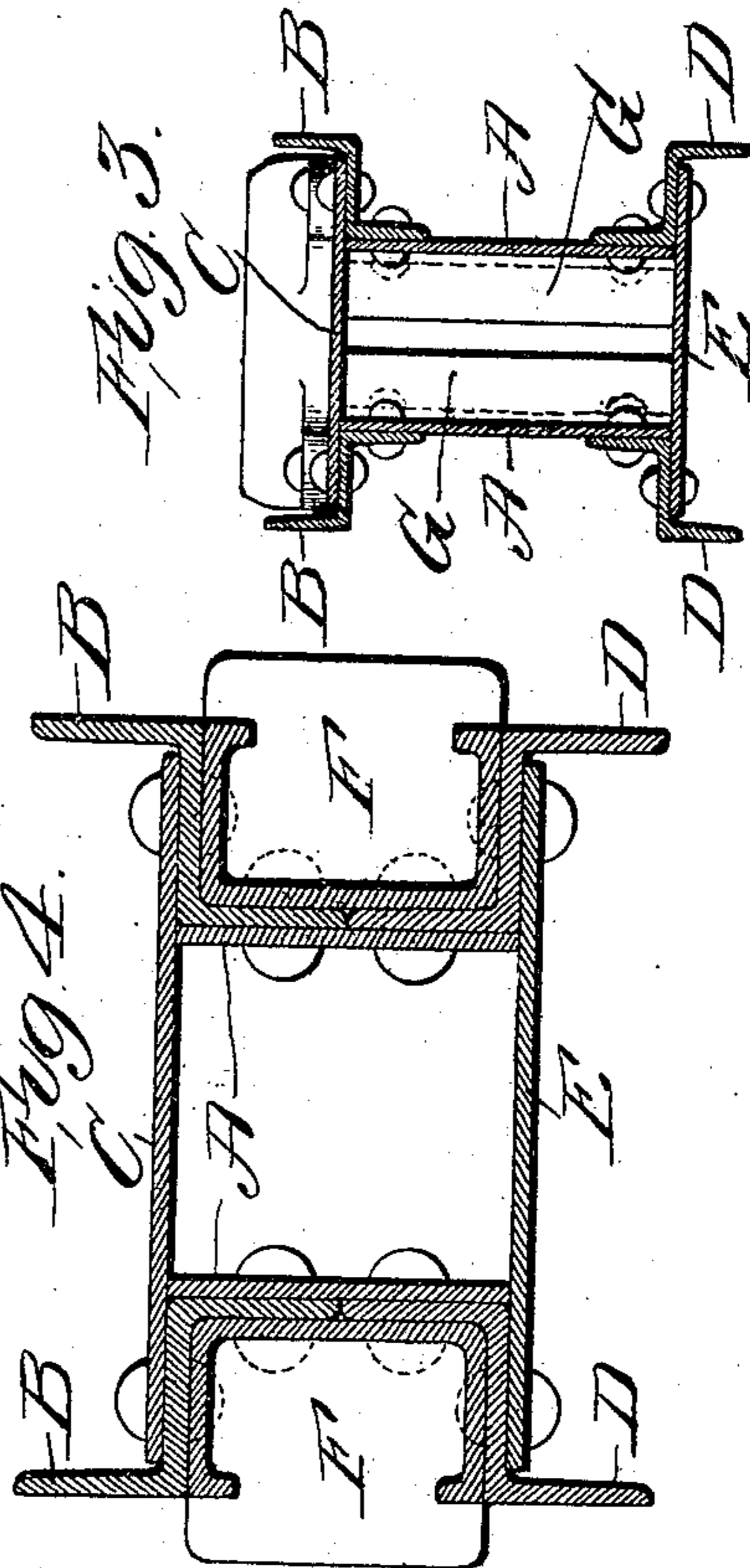
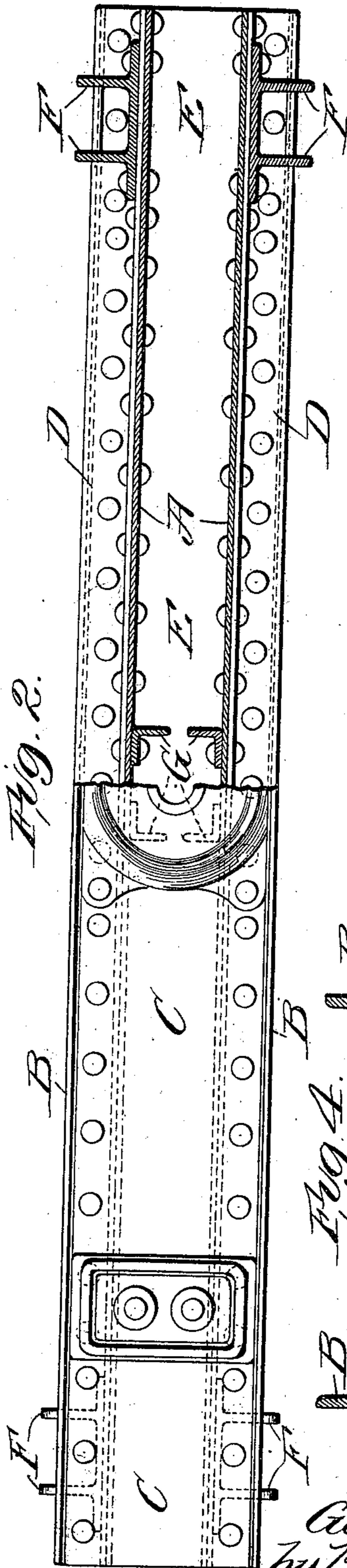
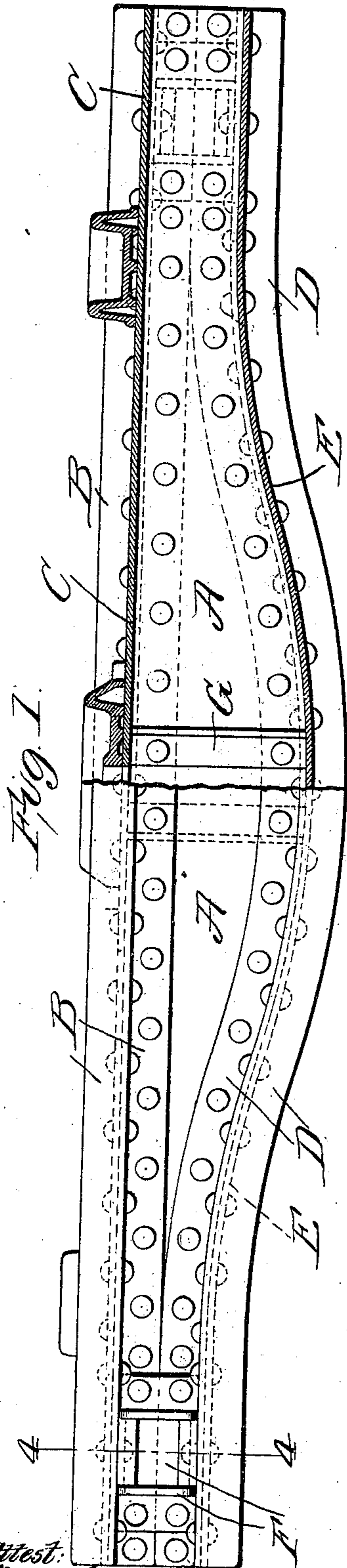
Patented Oct. 29, 1901.

G. I. KING.

BOLSTER.

(Application filed Aug. 22, 1901.)

(No Model.)



Inventor:
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UNITED STATES PATENT OFFICE.

GEORGE I. KING, OF DETROIT, MICHIGAN, ASSIGNOR TO AMERICAN CAR & FOUNDRY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

BOLSTER.

SPECIFICATION forming part of Letters Patent No. 685,453, dated October 29, 1901.

Application filed August 22, 1901. Serial No. 72,927. (No model.)

To all whom it may concern:

Be it known that I, GEORGE I. KING, a citizen of the United States, residing at the city of Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Bolsters, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevational view of my improved bolster, one end being shown in section. Fig. 2 is a top plan view of the same, partly in horizontal section. Fig. 3 is an enlarged cross-sectional view on line 3 3, Fig. 1; and Fig. 4 is a cross-sectional view on line 4 4, Fig. 1.

This invention relates to a new and useful improvement in bolsters especially designed for use in connection with car-trucks.

The objects of the invention are to simplify the construction of bolsters of the character described, enabling the employment of a minimum amount of material for the production of a strong and rigid bolster.

Another object is to use structural and rolled members, whereby the parts are easily assembled and repairs can be quickly made.

A further object is to enable the employment of a machine-riveter in the assemblage of the parts, thereby facilitating and reducing the cost of manufacture.

With these objects in view the invention consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described and afterward pointed out in the claims.

In the drawings I have shown a type of bolster commonly known as "box-girder form," in which commercially-rolled members are employed, the bolster being what is known as a "built-up" structure. The essential or main members of the bolster are preferably plates, which are connected together by suitable angles or Z-bars, so as to produce the most rigid structure. The bolster as an entirety is deepest at its middle portion, the top plate carrying the usual center and side bearings. The side web-plates are provided with the

usual column-guides, and under each end of the bolster separate spring-seats may be provided, if desired, or the springs may be seated directly against the bottom cover-plate. 55

In the drawings, A indicates the vertical side webs, which are preferably composed of plates, said webs being deepest at their middle portion and shallow at their ends. The upper edges of these plates may be straight, 60 as shown, or they may be slightly crowned, and to these upper edges are secured the legs of Z-bars B.

C indicates the top plate of the bolster, which is preferably wider than the distance 65 between the side webs, the projecting edges of said plate being riveted to the webs of the Z-bars B. The outer legs of the Z-bars are preferably presented upwardly, as shown in Fig. 3. 70

D indicates Z-bars arranged along the lower outer edges of the vertical side webs, said Z-bars being preferably bent to conform to the shape of said lower edges of the vertical side webs. These Z-bars have one of 75 their legs riveted to the lower edges of the vertical side webs, while the webs of the Z-bars extend horizontally in a lateral direction and have riveted to them the projecting edges of the bottom cover-plate E. The outer 80 legs of the Z-bars D are presented downwardly, as shown.

Referring to Fig. 1, it will be observed that the inner legs of the Z-bars approach each other at the ends of the bolster, and between 85 the Z-bars, at proper places, are arranged column-guides F. These column-guides are preferably in the form of malleable castings made hollow, so that the rivets may be driven through the castings to hold the same in position. The function of these column-guides is so well understood that it is deemed unnecessary to enter into a detailed description of the same here. 90

G indicates stiffening-angles, preferably arranged vertically and in the vertical plane of 95 the center plate. These stiffening-angles may be riveted to the vertical webs of the bolster throughout the whole or a portion of their length, these serving to strengthen the structure at its center, where the center bearing is 100 located.

It will be noted with respect to the above construction that it follows generally the form of a box-girder. The bolster being deepest at its middle portion enables the shallow ends to be supported by springs in the usual manner. The top cover-plate of the bolster is in compression under load, while the bottom cover-plate is in tension. The Z-bars arranged at the upper edges of the bolster are likewise placed in compression, while the Z-bars at the lower edges of the bolster are in tension. The vertical web-plates serve to a certain extent as plate-girders, and in this manner a most rigid and strong bolster is produced.

So far as I am aware I am the first to employ Z-bars in the manner herein shown and described, said Z-bars being combined and arranged as connection members for the top and bottom cover-plates and the vertical web-plates.

I am aware that minor changes in the construction, arrangement, and combination of the several parts of my device may be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a truck-bolster, the combination with vertical web-plates, of top and bottom cover-plates, and Z-bars for connecting said web-plates and said cover-plates, substantially as described.

2. In a truck-bolster, the combination with the web-plates made deepest at their middle portions, of top and bottom cover-plates, and Z-bars for connecting said cover-plates to said web-plates, substantially as described.

3. In a truck-bolster, the combination with the web-plates, of top and bottom cover-plates, Z-bars to which said web-plates and cover-plates are connected, and column-guides arranged between the webs of the Z-bars at the ends of the bolster, substantially as described.

4. In a bolster for car-trucks, the combination with the web-plates, of top and bottom cover-plates, Z-bars forming connections between the web-plates and cover-plates, column-guides arranged between the webs of the Z-bars, and strengthening-angles at the center of the bolster, substantially as described.

5. In a bolster for car-trucks, the combination with web-plates arranged parallel to each other, of top and bottom cover-plates extending laterally beyond the web-plates, and Z-bars whose outer legs are presented upwardly and downwardly, respectively, said top and bottom plates and web-plates being riveted to said Z-bars, substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 16th day of August, 1901.

GEORGE I. KING.

Witnesses:

GEORGE BAKEWELL,
GALES P. MOORE.