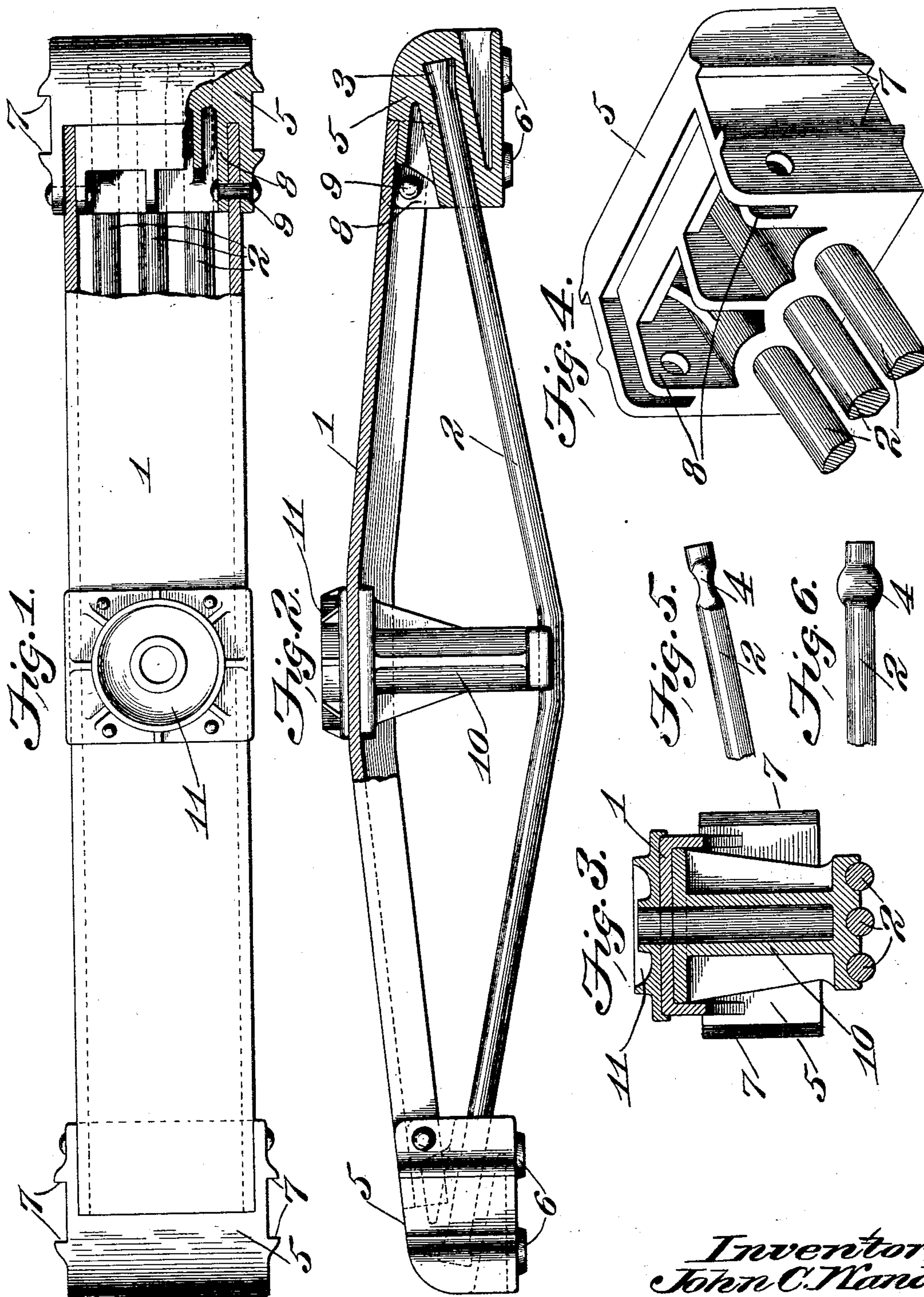


No. 713,543.

Patented Nov. 11, 1902.

J. C. WANDS.
CAR TRUCK BOLSTER.
(Application filed Aug. 11, 1902.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN C. WANDS, OF ST. LOUIS, MISSOURI.

CAR-TRUCK BOLSTER.

SPECIFICATION forming part of Letters Patent No. 713,543, dated November 11, 1902.

Application filed August 11, 1902. Serial No. 119,279. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WANDS, a citizen of the United States, residing at 5642 Von Versen avenue, St. Louis, Missouri, have invented a certain new and useful Improvement in Car-Truck 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 top plan view, partly in horizontal section. Fig. 2 is a side elevational view, partly in vertical section. Fig. 3 is a vertical cross-sectional view. Fig. 4 is a detail view of the end casting. Fig. 5 is a detail view of a modified form of end of one of the tension-rods, showing the same in side elevation; and Fig. 6 is a top plan view of the same.

This invention relates to a new and useful improvement in bolsters designed particularly for use in car-trucks, although my invention is equally applicable to bolsters for supporting the end of the car, commonly known as "body-bolsters" or "transoms," and also the principles of my invention are applicable to other types of truss-beams generally.

My 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, 1 indicates the compression member, which preferably consists of a commercially-rolled channel appropriately cambered. This channel form of compression member is selected for reasons of economy and because the same may be readily obtained in the market. It is obvious, however, that other forms of compression members—such as I-beams, angles, Z-bars, &c.—could be used, and, further, that instead of being in the form of commercially-rolled sections said compression member could be cast or otherwise formed.

2 indicates the tension member, preferably in the form of a rod, whose end is upset, as at 3 in Fig. 2, or squeezed, as at 4 in Figs. 5 and 6. The purpose of this enlargement at the end of the tension member is to attach the same in the head-casting, and it is obvi-

ous that this could be accomplished equally as well by perforating the end of the tension member within the lines of the casting or forming an eye at the end instead of enlarging the cross-section of the metal.

5 indicates the end casting or "head-block," as it might be termed, which end casting is cast upon the end of the tension member. This can readily be done by introducing the end of the tension member a proper distance into the mold and then pouring the molten metal into the mold and around the end of the tension member. When the casting is cool, the end of the tension member is firmly embedded therein and practically becomes an integral part of the tension member, requiring no other fastening devices. There are end castings or head-blocks arranged at each end of the tension member, and, as shown in Fig. 2, the lower faces of these castings are provided with circular bosses 6, forming spring-seats. The side faces of the casting are provided with vertical ribs 7, forming column-guides. The upper face of each casting is provided with a seat for the reception of the end of the compression member. The top face of the casting beyond the compression member is flush with the upper face of said compression member, and thus the end of the compression member may be said to be countersunk in the casting, the casting in this way being best adapted to act as a thrust-block in taking up the end thrusts of the compression member. The end casting is preferably cored to lighten the same, and webs 8 extend parallel with the sides and within the lines of the flanges of the compression member, said webs and sides being perforated for the reception of rivets or other securing devices 9, by which the ends of the compression member are secured in position in the casting.

10 indicates the strut, preferably in the form of a casting and hollowed out for the reception of the king-pin.

11 indicates the center plate, which is riveted to the compression member. Side bearings (not shown) are also designed to be arranged on the compression member, near the ends thereof, as is usual.

In the above description I have referred to the tension member as a single element; but

in the drawings it will be seen that said tension member is composed of three rods, preferably bent to give depth to the center of the trussed structure, said rods being arranged
 5 parallel to each other and having their ends embedded in the end castings. It is obvious that one or more rods may be employed to constitute that element of the truss known as the "tension member;" also that one or more
 10 members may be employed to constitute that element of the truss known as the "compression member."

In practice the rod or rods forming the tension member are first upset, squeezed, or otherwise formed for attachment in the end castings, and the end castings are cast on the ends of said rod or rods. Preferably the rods are bent to the desired shape before the end castings are formed thereon. The strut is
 15 provided with seats in its lower face to receive these rods. The compression member may be slightly bent before being introduced into position and riveted. The same rivets that are used to secure the center plate in
 20 place preferably pass through the upper flange of the strut.

I am aware that many minor changes in the construction, arrangement, and combination of the several parts of my device can be made
 30 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 as new, and desire to secure by Letters
 35 Patent, is—

1. A car-truck bolster comprising a tension member, head-blocks cast on the ends thereof, a compression member attached to the head-blocks, and a strut; substantially as described.

40 2. A car-truck bolster comprising a tension member composed of two or more elements, head-blocks cast on the ends thereof, a compression member attached to the head-blocks, and a strut; substantially as described.

45 3. A car-truck bolster comprising a tension member having its ends shaped for permanent attachment in a casting, head-blocks cast on the ends of said tension member, a compression

member, and a strut; substantially as described. 50

4. A car-truck bolster comprising commercially-formed compression and tension members, head-blocks which are cast on the ends of the latter and attached to the ends of the former, and a strut; substantially as described. 55

5. A car-truck bolster comprising a tension member in the form of a rod or rods whose ends are shaped for permanent attachment in a casting, head-blocks cast on the ends of said
 60 tension member, said head-blocks being provided with seats for the compression member, and a commercially-rolled compression member seated in the head-blocks and attached thereto, and a strut; substantially as described. 65

6. A car-truck bolster comprising a commercially-rolled compression member, a tension member, head-blocks cast on the ends of the tension member and attached to the ends
 70 of the compression member to take up the end thrusts of the latter, and a strut; substantially as described.

7. A car-truck bolster comprising a tension member, head-blocks cast on the ends of said
 75 tension member, said head-blocks providing spring-seats and having column-guides, a compression member attached to the head-blocks, and a strut; substantially as described.

8. A car-truck bolster comprising a compression member in the form of a commercially-rolled channel, a tension member composed of rods arranged parallel to each other, a strut, head-blocks cast on the ends of the rods constituting the tension member, and
 85 means for securing the ends of the compression member to said head-blocks; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, 90
 this 9th day of August, 1902.

JOHN C. WANDS.

Witnesses:

GEORGE BAKEWELL,
 G. A. PENNINGTON.