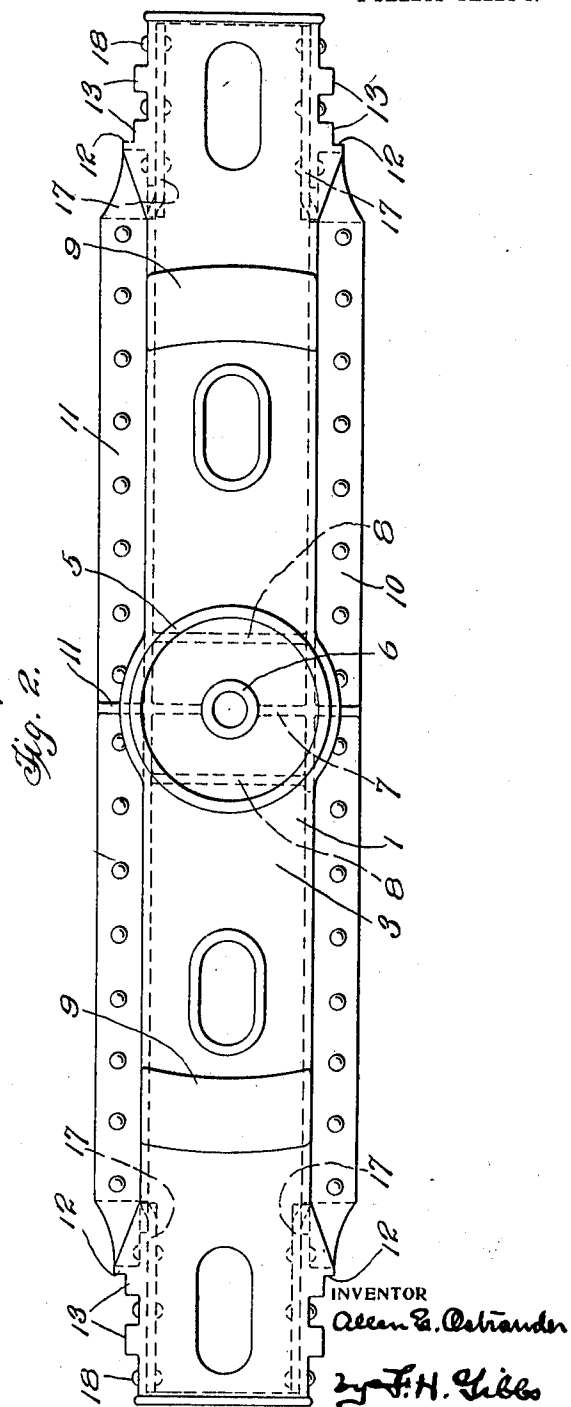
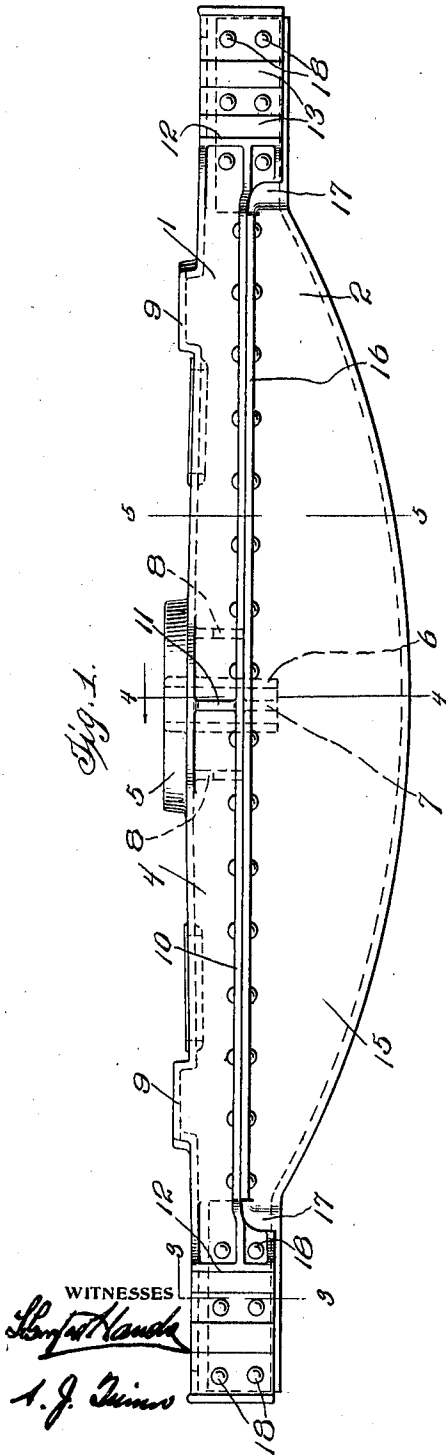


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2 SHEETS-SHEET 1.



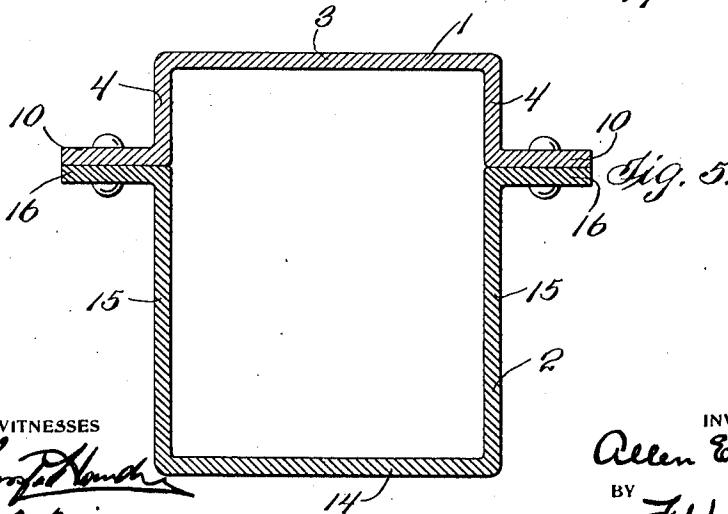
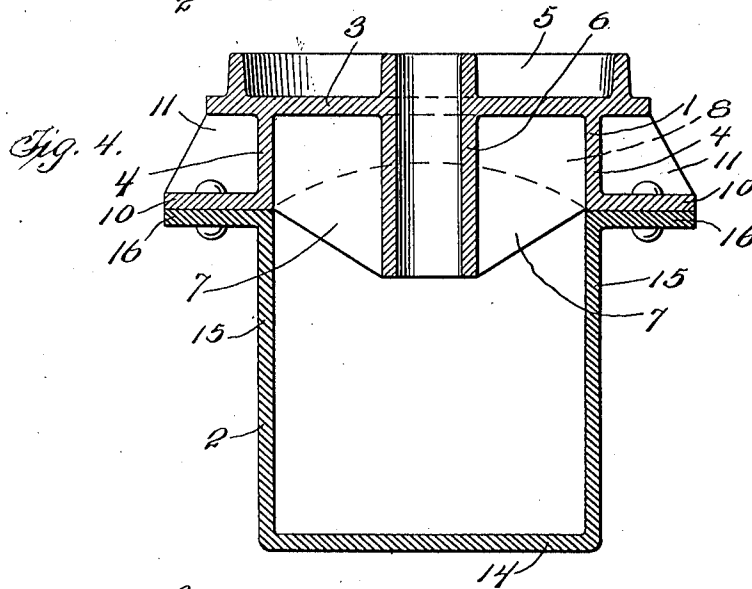
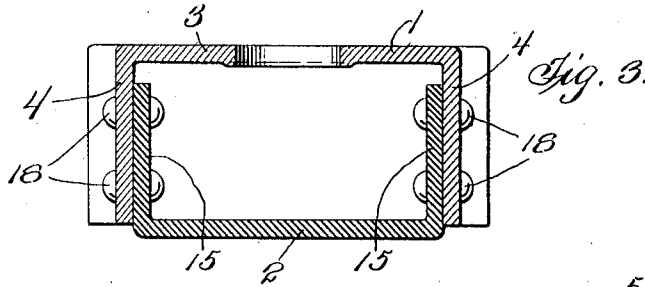
ATTORNEY

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2 SHEETS-SHEET 2.



WITNESSES
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UNITED STATES PATENT OFFICE.

ALLEN E. OSTRANDER, OF RIDGEWOOD, NEW JERSEY, ASSIGNOR TO AMERICAN CAR AND FOUNDRY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

TRUCK-BOLSTER.

1,026,823.

Specification of Letters Patent.

Patented May 21, 1912.

Application filed March 8, 1911. Serial No. 613,194.

To all whom it may concern:

Be it known that I, ALLEN E. OSTRANDER, residing at Ridgewood, Bergen county, New Jersey, and being a citizen of the United States, have invented certain new and useful Improvements in 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 to use the same, reference being had to the accompanying drawings, which illustrate the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof will occur to persons skilled in the art.

In said drawings: Figure 1 is a side elevational view of a bolster constructed in accordance with my invention. Fig. 2 is a top plan view thereof, and Figs. 3, 4 and 5 are enlarged vertical transverse sectional views taken respectively on the lines 3—3, 4—4 and 5—5 of Fig. 1.

The principal object of this invention is to produce in a box-girder-like bolster for car trucks, a structure composed of only two parts, disposed horizontally, one above the other, and each of practically the same length, and in these two parts to provide all of the essential features of a truck bolster, including center bearing plate, side bearings, vertical guides, necessary stiffeners, etc.

A further object is to so form and connect the two parts constituting the structure that the upper of said parts constituting the compression member may be of cast metal, while the lower or tension member may be formed of pressed steel.

The particular advantages to be derived from the construction and arrangement as just described are:

1st. That in the use of a casting for a compression member I have an element capable of withstanding a very great amount of compression, even though said casting may be more or less imperfect through presence of blow-holes or other defects. The presence of such imperfections greatly impairs the tensile strength of a casting, but they have only a negligible effect upon the compression sustaining value thereof.

2nd. That in the use of pressed steel for

the tension member, especially when formed as illustrated in the drawings, I have an element of very great proportionate tensile strength.

3rd. That with the casting used as the top member of the bolster, the center bearing, side bearings, vertical guides, etc., may be readily cast as integral parts thereof.

I am aware that it is old in the art to provide a cast compression member as described, and that it has also been recognized that a rolled, or even a pressed shape, is the ideal form of a tension member, but it has never before been suggested to combine these two features in a box-girder-like bolster, as disclosed in this application. The patent to Ames and Ames, No. 748,322, illustrates in pressed metal the general form and arrangement of the parts, but there is no suggestion in that patent, or in any other patent of which I am aware, that the compression member of such a form of bolster may be formed as a casting with integral detail features, as hereinbefore set forth.

As disclosed in the drawings, which form part of this specification, the numeral 1 indicates the cast compression member, and 2 the pressed steel tension member. The member 1 is formed of a top wall 3, with depending side walls 4—4, extending from end to end thereof. The walls 4—4 are spaced a uniform distance apart throughout their length.

The center bearing 5 is formed upon the upper surface of the top wall 3, midway between the ends thereof. A central vertical tubular portion as 6 is provided for the reception of the usual king-pin and said tubular portion is made to depend to a point below the plane of the lower edges of the depending walls 4—4. Connecting and reinforcing ribs as 7 extend from opposite sides of the portion 6 and connect with the adjacent portions of the top and side walls. Similar webs as 8—8 are disposed upon opposite sides of the portion 6, within the zone of the center bearing, and serve to connect the top and side walls for reinforcing said walls in directly sustaining the superposed weights which may come to bear upon the center bearing.

The side bearings as at 9 are formed upon the upper surface of the top wall 3, at uniform distances upon opposite sides of the center bearing and said side bearings may be

of any desired shape consistent with practicability in casting. The intermediate portions of the walls 4—4, which are of less depth than the end portions thereof, are formed with outstanding flanges along their entire lower edges as at 10—10. Adjacent the center bearing portion the flange 10 is connected to an overhanging portion of said center bearing by a vertical rib as 11.

10 The end portions of the walls 4 are formed with outstanding vertical ribs or guides as 12—12, which are adapted to engage the column guides of the side frame of the truck. Embossments as 13—13 are formed upon the side walls so as to produce relatively depressed portions for receiving the protruding heads of the rivets adapted to connect the two parts of the structure at this point and thus to render it possible to utilize ordinary round-head rivets. The outer flat vertical faces of the embossments 13 are adapted to engage the opposing faces of the column guides of the side frame.

25 The pressed tension member 2 is formed of a bottom wall 14 with upstanding side flanges or walls 15—15 which walls extend from end to end thereof. The bottom wall 14 is depressed at its central portion so as to form what is commonly known as a "bathtub" tension member. The side walls 15, throughout the greater portion of their length, are spaced apart a distance equal to the distance between the walls 4 of the casting 1 and are disposed so as to lie in vertical planes directly beneath said walls 4. The upper edges of the portions of the walls 15

so described are turned or flanged outwardly as at 16 so as to engage, and be riveted to, the under surfaces of the flanges 10 of the walls 4. The opposite ends of the walls 15 as at 17—17 are in-set so as to fit between the inner surfaces of the opposing walls 4. The upper edges of the portions 17 are extended upwardly nearly to the under surface of the top wall 3 of the casting 1, while the lower edges of the adjacent portions of the side walls 4 of said casting are extended practically to the bottom of the adjacent portion of the tension member 2. The lapping vertical walls of the two members are securely riveted as at 18—18.

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

In a box girder-like bolster, complementary boxes, the upper being composed of cast metal, and constructed with a flat or horizontal upper surface carrying the king-pin socket and side bearings, the lower box being composed of pressed metal, the greatest depth of the lower box being at the greatest point of strain between the supporting ends, and suitable outstanding flanges and means extending through said flanges for uniting the boxes rigidly together.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ALLEN E. OSTRANDER.

Witnesses:

L. GESSFORD HANDY,
FRANK V. COOPER.