J. A. PILCHER.

CAR TRUCK BOLSTER.

APPLICATION FILED AUG. 5, 1915.

1,213,252.

Patented Jan. 23, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

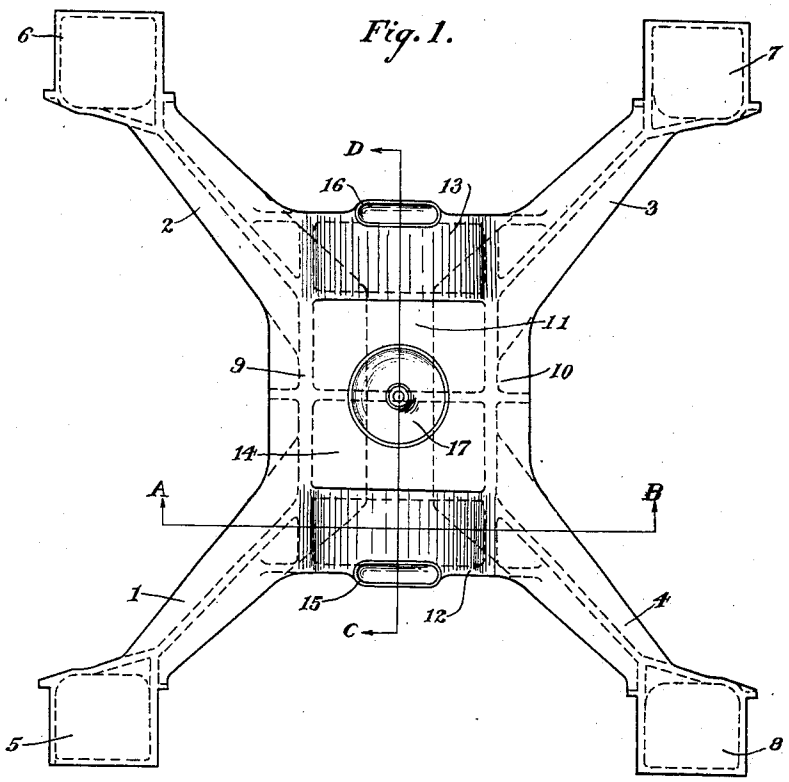
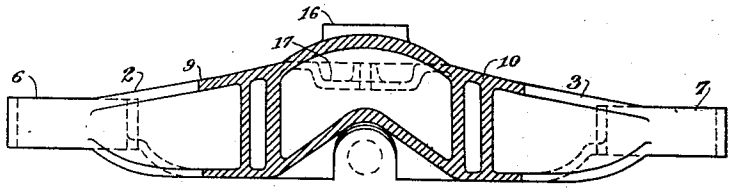


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

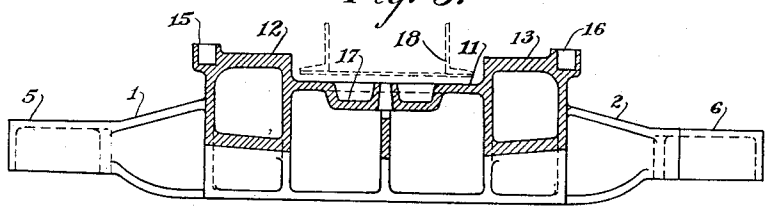
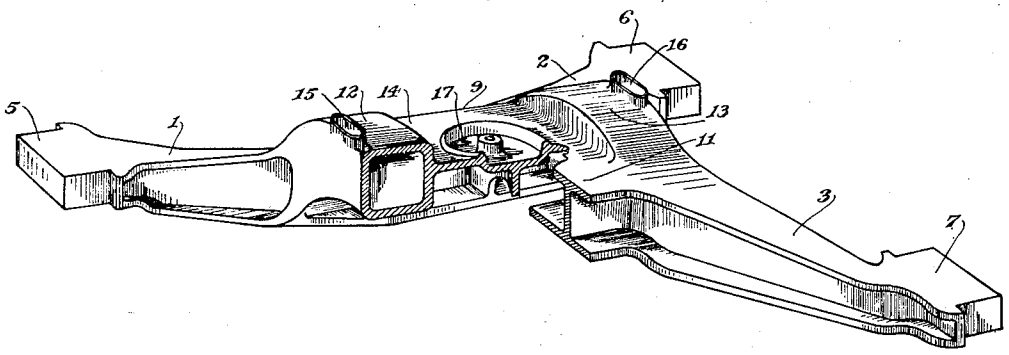


Fig. 4.



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CAR TRUCK-BOLSTER.

1,213,252. Specification of Letters Patent. Patented Jan. 23, 1917.

Application filed August 5, 1915. Serial No. 43,787.

To all whom it may concern:

Be it known that I, JOHN A. PILCHER, a citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented certain new and useful Improvements in Car Truck-Bolsters, of which the following is a specification.

This invention relates to truck bolsters for railway cars and has to do primarily with integral castings of platform construction.

The principal object of the invention is to provide a bolster of simple construction, of light weight, and of maximum strength for the metal used. Also to provide such an arrangement of the various details of the bolster as will adapt the same to use under cars of limited clearance, and in connection therewith to arrange such details so as to give them proper strength and support.

The invention consists in the peculiar formation of truck bolsters as will now be described and finally claimed.

In the drawings, Figure 1 is a plan view of a bolster constructed in accordance with my invention. Fig. 2 is a longitudinal-vertical section of the same taken on the line A B of Fig. 1. Fig. 3 is a transverse-vertical section taken on the line C D of Fig. 1. Fig. 4 is a broken perspective view showing the construction of various of the elements of the bolster.

Referring to these drawings, it will be seen that the bolster in question is made in the general form of the letter X when viewed in plan view, the arms 1—2—3 and 4 thereof extending outwardly from the central portion as the legs of the X. The terminals 5, 6—7 and 8 respectively thereof are provided with spring pockets or are otherwise formed to serve as supporting points for the said bolster.

The general idea of the bolster structure is that the two adjacent terminals at each end of the bolster are connected by means of continuous beams and these beams are then joined at the center by a beam construction which, though cast integral with the main beams, is yet in reality distinguished therefrom and may be identified as an individual structure. Thus the terminals 5 and 6 are connected by a continuous beam made up of the arms 1 and 2 with the intermediate portion 9 and the terminals 7 and 8 are connected by a like continuous beam made up of the arms 3 and 4 with the intermediate portion 10. The general cross section of this continuous beam is of I-shape for such shape most readily works in with the other portions of my construction.

The intermediate portions 9 and 10 of the continuous beams are in parallel and spaced relation with each other and are here connected together by means of the joining beam construction 11 already described. The spaced relation of the portions 9 and 10 provides a transverse passage for the admission of the middle truck axle or other element as shown in dotted lines in Fig. 2, and in order to maintain this passage the beam construction is arched across from 9 to 10, extending from web to web of the I-sections in order to put the reactions on members of sufficient strength to resist the forces from the beam construction 11.

The beam construction 11 is preferably made of two main arched portions 12 and 13 disposed in spaced relation with each other with an intervening flat portion 14 extending from 9 to 10. The arched portions 12 and 13 carry the side bearings 15 and 16 and the flat portion 14 carries the center-bearing plate 17. Thus the side bearings are on structures that are well adapted to resist the side-bearing blow and the center-plate is on a relatively-depressed portion so that there is space provided for the passage of the center sills 18 of the car.

In order that the top and bottom flanges of the arched-beam members 12 and 13 may not spring out of line when loaded, these sections are made of box-shape whereby are provided two spaced-vertical webs for each portion to hold the flanges in line. And in order that the main continuous beams already described may not tend to straighten at the angle points, the one wall of each of the said box sections joins with the webs of the I-sections at the points where the direction thereof changes. Thus the I-section beams will be held from straightening by the one wall of each of the box-section beam portions. The other wall of each of the box sections serves as a substantial support for the side bearings.

The center-bearing plate is located at the intersection point of the X and the arms 1—2—3 and 4 extend generally outward in radial lines from this point.

The structure shown and described forms a truck bolster of desirable disposition of the

metal so as to utilize it to the maximum of its value. And

Having so shown and described an embodiment of my invention I claim the following:

1. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams extending between adjacent terminals and connected near the intersection point of the X by a distinct joining beam, the said joining beam being made with two parallel spaced main portions spanning the said continuous beams with a relatively depressed portion therebetween, and a center-bearing plate on the said depressed portion, the said depressed portion extending also from one to the other of the said main parallel portions and being joined thereto.

2. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams extending between adjacent terminals and connected near the intersection point of the X by a distinct joining beam, the said joining beam being arched between the said continuous beams.

3. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams extending between adjacent terminals and connected near the intersection point of the X by a distinct joining beam, the said joining beam being made with two parallel-spaced main portions spanning the said continuous beams with a relatively depressed portion therebetween, and a center-bearing plate on the said depressed portion, the said parallel-spaced portions being arched between the said continuous beams, and the said relatively-depressed portion extending directly across from one of said continuous beams to the other.

4. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams extending between adjacent terminals and connected near the intersection point of the X by a distinct joining beam, the said joining beam being made with two parallel-spaced main portions spanning the said continuous beam with a relatively-depressed portion therebetween, a center-bearing plate on the said depressed portion, and side bearings on the said main portion at each side of the said center-bearing plate, said depressed portion extending also from one to the other of the said main parallel portions and being joined thereto.

5. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams extending between adjacent terminals and connected near the intersection point of the X by a distinct joining beam, the said joining beam being made with two parallel-spaced main portions spanning the said continuous beams with a relatively-depressed portion therebetween, and a center-bearing plate on the said depressed portion, the said parallel-spaced portions being arched between the said continuous beams and the said relatively-depressed portion extending directly across from one of said continuous beams to the other, the said continuous members being of I-shape in cross section and the said arched main portions of the joining beam being of box-shape in cross section.

6. An X-shaped truck bolster having the terminals of the X formed to provide supporting points for the same, the X being formed of two continuous beams of I-shape in cross section extending between adjacent terminals, the said continuous beams extending radially from the terminals of the X inwardly to adjacent the intersection point thereof and there being disposed in parallel and spaced relation with each other and being connected with each other at the parallel portions by a joining member distinct from the said continuous beams, the said joining member being composed of two parallel beam members in spaced relation with each other and of box-shape in cross section, one of the vertical walls of each box section being joined to the vertical webs of the I-section beams at the points where the said I-section beams diverge from their radial path to the here-in-before specified parallel path.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. PILCHER.

Witnesses:
E. G. GOODWIN,
G. MASLIN DAVIS.