

J. H. BAKER.
SIDE FRAME FOR CAR TRUCKS.
APPLICATION FILED JULY 15, 1909.

958,462.

Patented May 17, 1910.

Fig. 1.

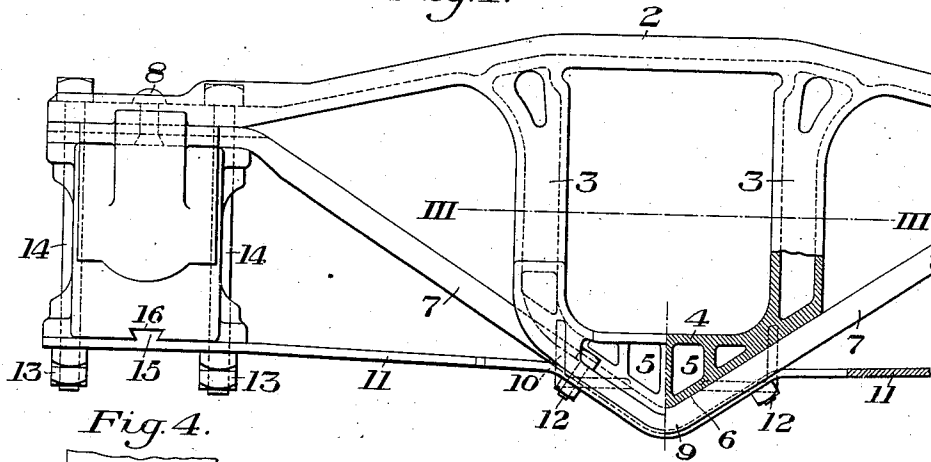


Fig. 4.

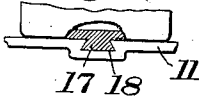


Fig. 5.

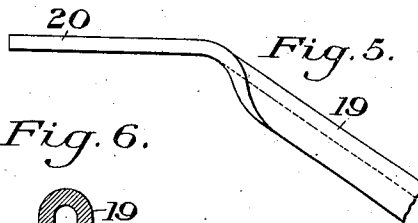


Fig. 6.



Fig. 2.

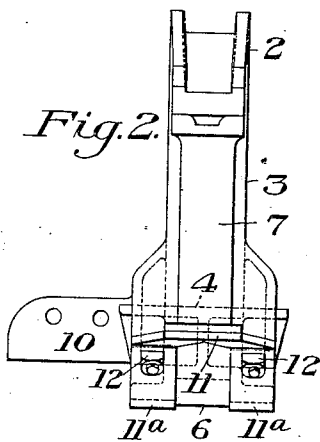
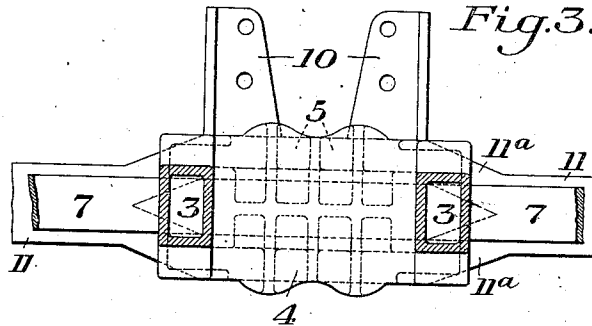


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES H. BAKER, -OF PITTSBURG, PENNSYLVANIA.

SIDE FRAME FOR CAR-TRUCKS.

958,462.

Specification of Letters Patent.

Patented May 17, 1910.

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To all whom it may concern:

Be it known that I, JAMES H. BAKER, of Pittsburg, Allegheny county, Pennsylvania, have invented a new and useful Improvement in Side Frames for Car-Trucks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view partly broken away of a side frame for car trucks embodying my invention; Fig. 2 is an end view of the same; Fig. 3 is a section on the line III—III of Fig. 1; Fig. 4 is a detail view, showing a modified form of the connection between the tie bar and the journal box; and Figs. 5 and 6 are detail views showing a different form of the lower arch bar or tension member of the side frame.

My invention has relation to side frames for car trucks and more particularly to side frames of the arch bar type, the object of my invention being to provide a side frame of simple and strong construction.

A further object is to provide a tension member of improved character; and a still further object is to provide for an additional means of connection between the tie bar and the journal boxes.

The precise nature of my invention will be best understood by reference to the accompanying drawings, in which I have shown the preferred embodiment thereof, and which will now be described, it being premised, however, that various changes may be made in the details of construction and arrangement of the parts by those skilled in the art without departing from the spirit and scope of my invention.

In these drawings, the numeral 2 designates the top arch bar or compression member of the side frame, having the bolster guides or columns 3, formed integrally therewith, said bar or member preferably consisting of a single integral casting. The bolster guides 3 are connected at the bottom by the integral spring-seating portion 4, which is preferably cored out, as indicated at 5, to give a lighter construction. The spring-seating portion 4 is provided at its under side with a central groove or recess 6, to receive the tension member 7, which is shown as formed of a separate piece of metal from the compression member, wrought metal being preferably employed for this purpose. The tension member is secured at

its ends to the under side of the end portions of the compression member 2, by bolts or rivets 8, its end portions being bent horizontally to abut the horizontally extending end portions of the member 2. From these horizontally extending end portions, the tension member extends obliquely downward to the center of the side frame, where it makes a sharp angular bend, as indicated at 9, the wall of the groove or recess 6 being shaped to fit this bend.

In the form shown in Figs. 1, 2 and 3, the tension member consists of a flat bar whose horizontally bent end portions are preferably widened and are somewhat thinner than the other portions of the member, the latter being of increased depth.

10 designates inwardly extending projections from the spring-seating portion 4, said projections being adapted for the attachment of tie bars connecting the opposite side frame to the truck.

11 designates the tie bar which is split longitudinally at its central portion and the sides thereof spread laterally, as shown at 11^a in Fig. 3, these spread portions being also bent downwardly and being shaped to fit the under side of the spring-seating portion 4, at each side of the groove or recess 6. The tie bar is secured to the portion 4 by bolts 12. In order to prevent play of the parts and also to prevent the tie bar from dropping down, should the nuts 13 of the journal box bolts 14 drop off, I preferably provide the end portions of the tie bar and the bottoms of the journal boxes with inter-fitting dovetailed projections and recesses. As shown in Fig. 1, the tie bar has a transverse dovetailed projection 15, which engages a correspondingly shaped recess 16, in the bottom of the journal box. This construction may, however, be reversed; as shown in Fig. 4, the journal box having a dovetailed rib 17, extending transversely across its bottom and the end portion of the tie bar being shaped to form a corresponding groove or recess 18. It will be readily seen that by reason of these dovetailed connections between the tie bar and the journal boxes, lateral play will be prevented and an additional support for the tie bar is provided.

Instead of making the tension member in the form of a flat bar, as in Figs. 1, 2 and 3, it may consist of a U-shaped bar or plate, having flattened end portions 20, as shown

in Figs. 5 and 6. By giving the tension member or lower arch bar a short angular bend at its central portion in the manner shown, the strength of said member is greatly increased, since the strains are carried to the points of support in straight lines; and the defects which have been found to exist in these members in trucks as heretofore constructed are largely obviated.

- 10 It will be obvious that many changes may be made in the details of construction and arrangement of the parts. Thus, the compression member may be made of various designs, the tension member may also be of other forms in cross section, the end portions of the tension and compression members may be united in various ways, and other minor changes may be made.

I claim:

- 20 1. In a side frame for car trucks, a compression member, and a tension member secured to the compression member at its end portions above the journal boxes and having a short angular bend at its central portion, together with bolster guides or columns acting as a strut and provided with a bearing for the central bent portion of the tension member, said tension member extending obliquely downward in a substantially straight line from the tops of the journal boxes to the angular bend, substantially as described.

- 25 2. A side frame for car trucks, comprising a tension member having integral bolster guides or columns, connected at the bottom, and a spring-seating portion, said spring-seating portion having a groove or recess on its under side, and a tension member secured to the compression member at its ends above the journal boxes and having an angular bend at its central portion fitting the said groove or recess, said tension member extending obliquely downward in a substantially straight line from the tops of the journal boxes to the angular bend, substantially as described.

- 30 3. A side frame for car trucks having a compression member formed with integral bolster columns or guides, connected at their lower ends by a spring-seating portion, said spring-seating portion having a groove or recess on its under side which extends in an upward direction from each side of the center, and a tension member having an angular bend at its central portion and seating in said groove or recess, the end portions of the tension member being secured to the compression member above the journal boxes, substantially as described.

- 60 4. In a side frame for car trucks, a cast

compression member having integral bolster guides or columns integrally connected at their lower ends by a spring-seating portion, said spring-seating portion having its greatest depth at the center, and a tension member secured to the compression member above the journal boxes and having a central angular bend in which the spring-seating portion bears, substantially as described.

5. In a side frame for car trucks, a compression member having bolster guides or columns connected at their lower ends, a tension member having an angular bend at its central portion and provided with a bearing in the bolster guides or columns, and a tie bar forked at its central portion and secured to the connecting portions of the bolster guides or columns at each side of the tension member, substantially as described.

6. In a side frame for car trucks, a compression member having bolster guides or columns connected at their lower ends, the connecting portion for the guides or columns being recessed on its under side, a tension member bearing in said recess, and a tie bar having a forked central portion secured to said connecting portion at each side of the tension member, substantially as described.

7. In a side frame for car trucks, a tie bar and journal boxes, said journal boxes and tie bar having dovetailed interfitting portions, substantially as described.

8. In a side frame for car trucks, the combination of a tie bar and journal boxes, said tie bar and journal boxes having transverse interfitting portions, substantially as described.

9. In a side frame for car trucks, a tension member having a short angular bend at its central portion and having substantially horizontal end portions arranged to extend above the journal boxes, said tension member extending obliquely downward from the journal boxes in a substantially straight line to the said bend, substantially as described.

10. In a side frame for car trucks, a compression member, and a tension member secured thereto, said tension member having an angular bend at its central portion at the center of the side frame and extending upwardly from each side of said bend to bring its upper ends above the journal boxes, substantially as described.

In testimony whereof, I have hereunto set my hand.

JAMES H. BAKER.

Witnesses:

GEO. H. PARMELEE,
H. M. CORWIN.