

A. O. BUCKIUS, JR.
TRUCK SIDE FRAME.
APPLICATION FILED SEPT. 10, 1910.

995,949.

Patented June 20, 1911.

2 SHEETS-SHEET 1.

Fig. 1.

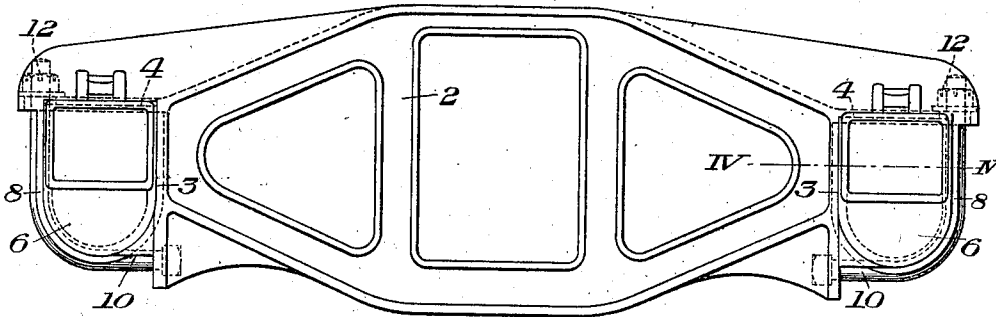


Fig. 2.



Fig. 3.

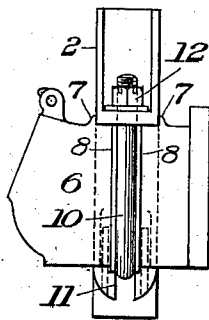
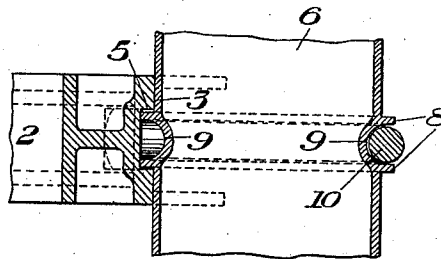


Fig. 4.



WITNESSES

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2 SHEETS-SHEET 2.

Fig. 5.

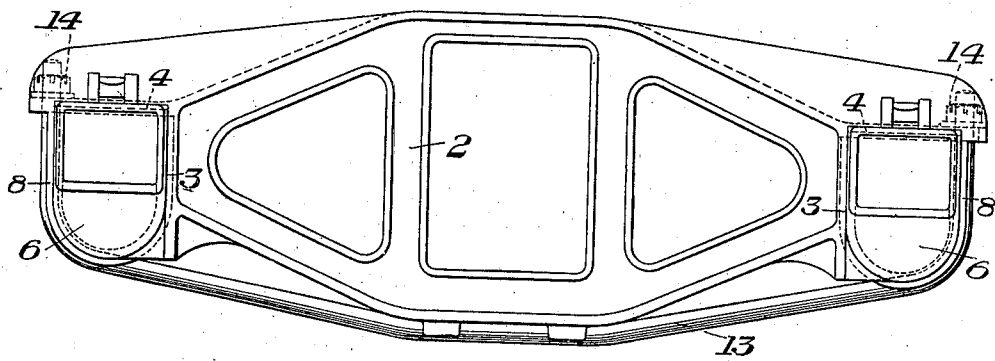
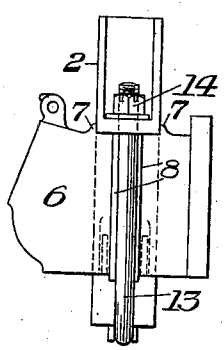


Fig. 6.



Fig. 7.



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UNITED STATES PATENT OFFICE.

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TRUCK SIDE FRAME.

995,949.

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Application filed September 10, 1910. Serial No. 581,464.

To all whom it may concern:

Be it known that I, ALBERT O. BUCKIUS, Jr., of Chicago, Cook county, Illinois, have invented a new and useful Improvement in Truck Side Frames, 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 elevation of one form of my improved side frame. Fig. 2 is an inverted plan view. Fig. 3 is an end view. Fig. 4 is a detail sectional view on the line IV—IV of Fig. 1. Figs. 5, 6 and 7 are views similar to Figs. 1, 2 and 3 respectively, showing a different form of strap for securing the boxes in position on the frame.

Heretofore side frames for freight car trucks have sometimes been made with the journal boxes cast integral with them. The variation in shrinkage of the metal when side frames are so cast with journal boxes integral, is so irregular that the distances between journal box centers are not uniform, resulting in putting car axles out of alignment and causing excessive wear on parts. Furthermore, when journal boxes are so cast integral with side frames, if a box is injured or broken, the entire side frame has to be discarded. In order to remove the wheels it is also necessary in the construction referred to that the side frames shall be removed from all their connections.

My invention overcomes the difficulties above referred to; and consists in providing the ends of the side frames with bearing surfaces for engaging the top and one side of each of the journal boxes, the boxes being rigidly secured to the side frames by means of strap bolts. These strap bolts engage the outer and also the lower sides of the boxes and rigidly secure them against the bearing faces on the side frames. This prevents both vertical and horizontal movement of the boxes with relation to the side frames and provides a very simple and desirable construction. In fact, my invention possesses all the advantages of the one-piece structure above referred to, together with a number of additional advantages, some of which are hereinafter referred to, without any of its disadvantages.

A further object of my invention is to provide for an improved connection between the boxes and the side frames and also to

provide an improved construction of the boxes themselves.

The precise nature of my invention will be best understood by reference to the accompanying drawings, which will now be described, it being premised, however, that various changes may be made in the details of construction and general arrangement of the parts without departing from the spirit and scope of my invention, as defined in the appended claims.

In the accompanying drawings, the numeral 2 designates the side frame. Each end of this side frame is provided with a bearing face 3 and 4, the bearing face 3 having a groove 5 throughout its length. Each of these faces is approximately the width of the side frame 2.

6 is a journal box which is provided with ribs 7 on the upper face thereof and is arranged to engage the sides of the truck side frame 2 along the face 4.

8 is a rib extending along both sides and around the bottom of the journal box 6. This rib is grooved as indicated at 9 for the purpose hereinafter described.

The journal boxes are secured to the side frame in the following manner. The faces 3 on the truck side frame are finished so as to place the journal boxes to exact centers, after which the box is inserted into position against the faces 3 and 4, and is secured in this position by means of an L-shaped strap bolt 10, which bolt is inserted into a slot 11 in the side frame, the other end of the bolt passing through an orifice in the face 4. The nut 12 is then placed on the end of the bolt and the bolt is drawn home and nut locked. This will draw the box against the faces 3 and 4. The rib 8 on the box being seated in the recess 5, the ribs 7 on the top of the journal box embracing the sides of the bearing face 4, and the bolt 10 lying in the groove 9 along one side and the portion of the bottom of the box. These various groove connections will prevent all endwise movement of the box, and the bolt will prevent any longitudinal or vertical movement of the box with relation to the truck side frame.

In Figs. 5 to 7, I have shown the same arrangement of side frame and journal boxes, but in this case, I provide a U-shaped strap 13 which engages the one side and the bottom of both boxes, and extends along the

bottom of the side frame. In this construction, I have provided two nuts 14, one on each end of the strap for securing the bolt in position. A bolt of this character will not only secure the boxes in position to the truck side frame, but it will also form a tension member for the side frame, thereby greatly strengthening the frame.

The advantages of my invention result from the provision of a truck side frame having two bearing faces arranged to engage the top and one side of each journal box, and a strap bolt which is arranged to engage the other side and the bottom of the journal box to draw and hold the journal box against two faces on the truck side frame.

By the use of a side frame of this character, I am enabled to renew a journal box without dismantling any portion of the truck with the exception of the boxes themselves. If one of the boxes should become broken or injured, it will only be necessary to jack up the ends of the truck side frames on that end of the truck in which the box is injured, and remove the strap bolts securing the boxes on this end, and then move the wheels longitudinally along the track to withdraw the boxes from the side frames. A new box can then be replaced for the broken or injured one and the wheels and the two boxes can be moved into position with relation to the side frames, the straps can then be placed around the boxes and secured in position, after which the end of the truck can be lowered so that the frames will again be supported on the axle.

I claim:

1. A truck side frame having two bearing faces at an angle to each other, a journal box seated on said faces and a strap arranged to draw and hold the box against said faces; substantially as described.

2. A truck side frame having two bearing faces at right angles to each other, a journal box seated on said faces, and a strap bolt arranged to draw and hold the boxes against said faces; substantially as described.

3. A truck side frame having two bearing faces at an angle to each other, a journal box seated on said faces, a tongue and groove connection between the box and side frame, and a strap arranged to draw and hold the box against said faces; substantially as described.

4. A truck side frame having two bearing

faces at an angle to each other, a journal box seated on said faces, a tongue and groove connection between the box and the side frame, a groove in the journal box, a strap seated in said groove, and means on the end of said strap and in engagement with the truck side frame to draw the journal box in two directions and hold it in fixed relation with said frame; substantially as described.

5. A truck side frame having two bearing faces at an angle to each other, a journal box seated against said faces and a strap bolt arranged to draw the box upwardly and inwardly; substantially as described.

6. A truck side frame having two bearing faces at an angle to each other, a journal box seated in the angle between the faces and having a convex lower portion, and a strap bolt secured at its ends in the side frame and engaging the outer and lower side of the box including the convex portion thereof, and acting to draw the box both upwardly and inwardly, substantially as described.

7. A truck side frame having overhung end portions provided with journal box seating faces on their under sides and the ends of the side frame proper also having journal box seating faces, journal boxes seated in said faces, strap bolts having their ends secured in the frame and embracing the outer and lower portions of the boxes, and acting to draw the boxes against both seating faces, and means for adjusting the tension of said bolts, substantially as described.

8. A truck side frame formed with overhung side portions each having a journal box seating face at its underside and the end of the side frame having a vertical journal box seating face adjacent to the first named seating face, journal boxes seated against said faces, and strap bolts removably securing the journal boxes to their seats, said boxes having flanges at their upper portions to embrace the sides of the overhung portion of the side frame, and the strap bolts acting to draw the boxes both laterally and vertically into contact with the seating faces, substantially as described.

In testimony whereof, I have hereunto set my hand.

ALBERT O. BUCKIUS, JR.

Witnesses:

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