No. 743,559. PATENTED NOV. 10, 1903.

C. H. READ.

LATERAL MOTION ARCH BAR TRUCK.

APPLICATION FILED JULY 15, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1

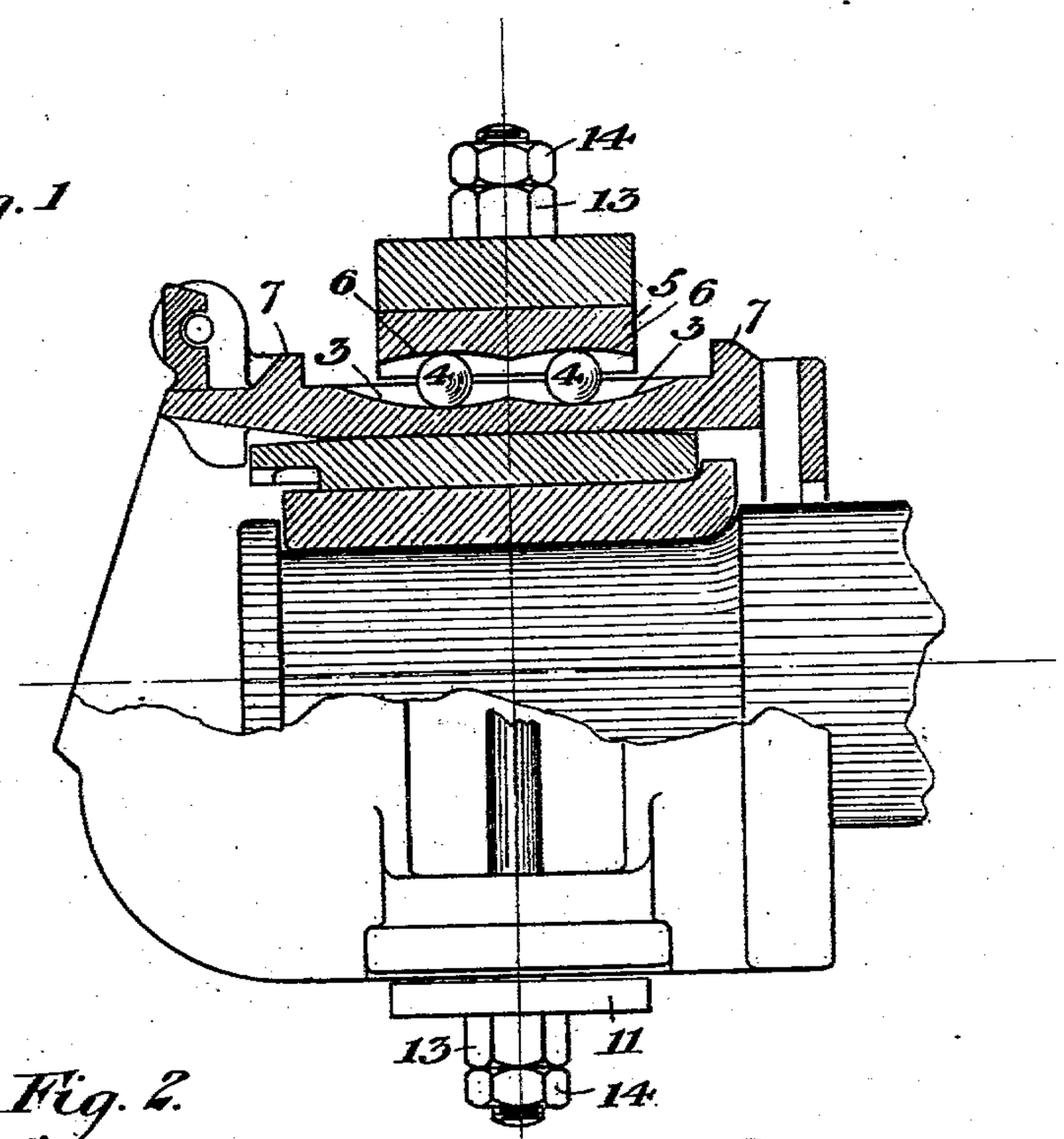
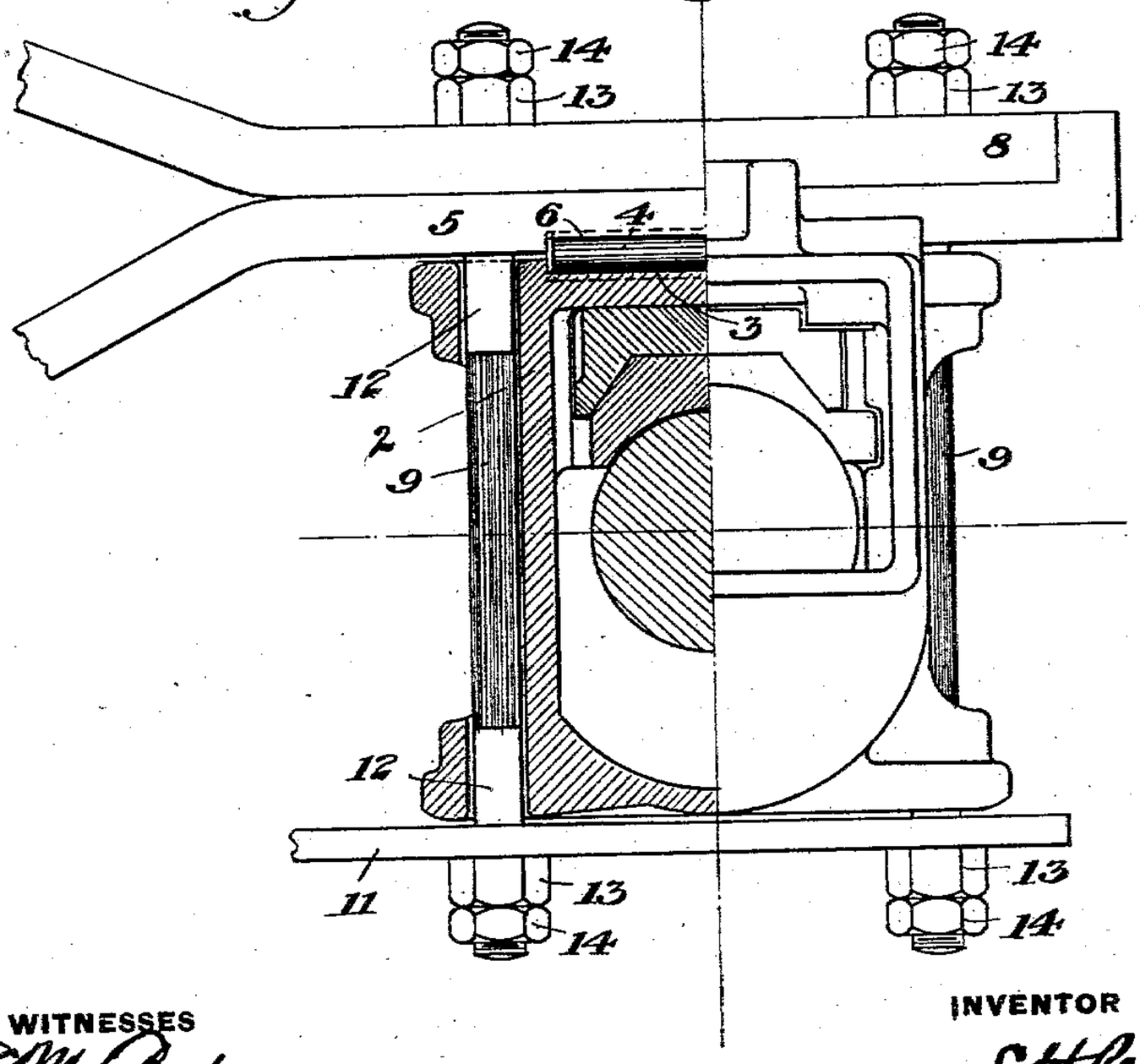


Fig. 2.



WITNESSES

L. M. Redmans

H. M. Corwin

INVENTOR

C. H. Read

by Baldwin & Hymes

his attys

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

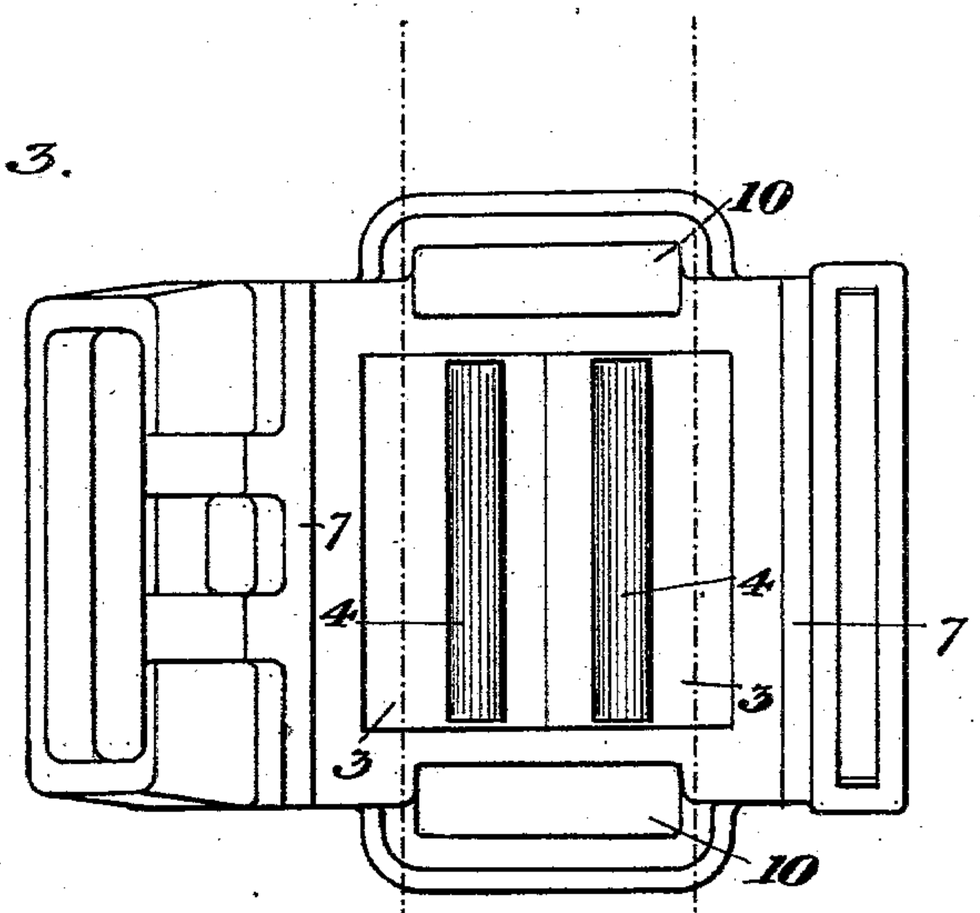


Fig. 4.

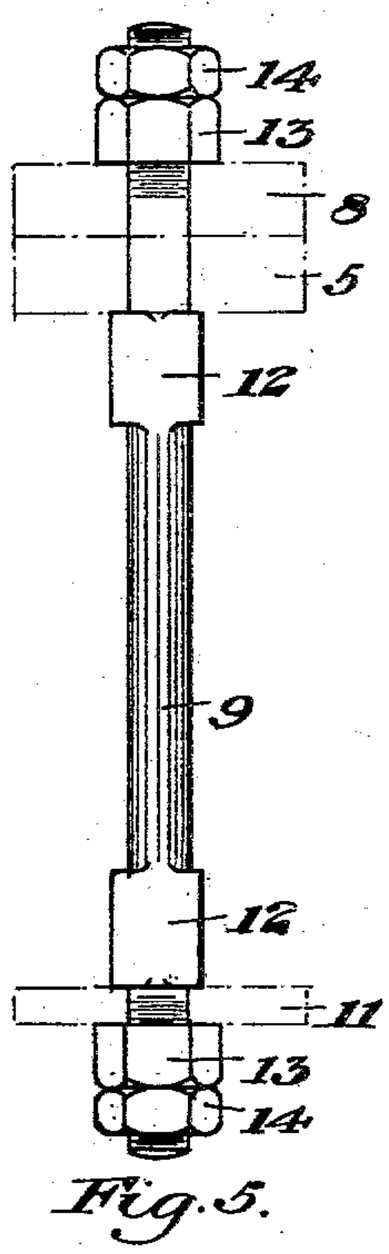


Fig. 6.

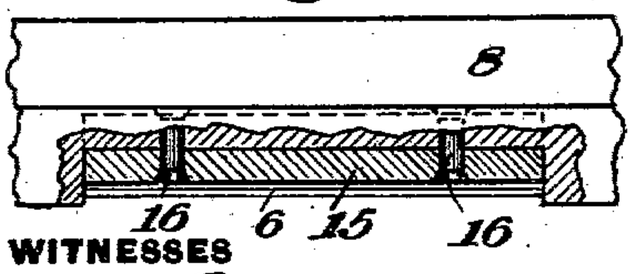
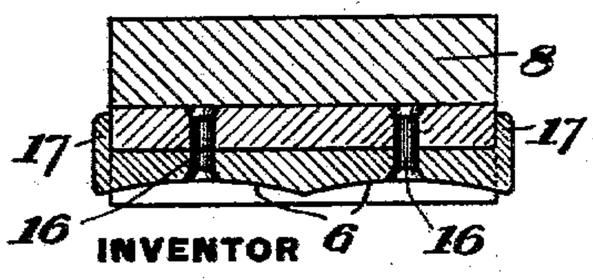


Fig. 5.

Fig. 7.



WITNESSES

L. M. Redman

H. M. Corwin

INVENTOR

C. H. Read

by Baldwin & Peyton

his attys

No. 743,559. Patented November 10, 1903.

UNITED STATES PATENT OFFICE.

CHARLES H. READ, OF PITTSBURG, PENNSYLVANIA.

LATERAL-MOTION ARCH-BAR TRUCK.

SPECIFICATION forming part of Letters Patent No. 743,559, dated November 10, 1903.

Application filed July 15, 1903. Serial No. 165,557. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. READ, of Pittsburg, Allegheny county, Pennsylvania, have invented a new and useful Lateral-Motion Arch-Bar Truck, 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, partly broken away, of the journal-box and arch-bars. Fig. 2 is a front elevation of the same, partly in vertical section. Fig. 3 is a top plan view with the arch-bars removed. Figs. 4 and 5 are detail views of the side bolts, and Figs. 6 and 7 are detail views showing an inset wearing-plate generally employed.

My invention relates to that class of arch-bar trucks for railway-cars wherein provision is made for lateral motion of the truck by means of rollers resting on the journal-box; and the object of the invention is to provide a simple and effective construction of this character wherein the rollers are directly beneath the arch-bars and no separate carriage is used, the rollers contacting directly with the lower arch-bar or with the wear-plate forming part of it.

In the drawings, 2 represents the journal-box, having concave recesses 3 3 extending transversely of its top and arranged to receive the rollers 4 4, on which the arch-bars rest.

In the form of Figs. 1 to 5, inclusive, the lower arch-bar 5 is provided with incut concave recesses 6 6, extending longitudinally of the arch-bar in the portion over the journal-box and arranged to register with corresponding recesses in the top of the journal-box. The journal-box top is preferably provided with upwardly-projecting stops 7 7 at its front and rear, these projections being preferably of sufficient length to engage the portions of the arch-bar beyond the recesses 6 and also being preferably of sufficient height to engage the arch-bar above these recesses to limit the lateral travel in both directions.

I have shown the upper arch-bar 8 as secured to the lower arch-bar by the side bolts 9 9, which extend down through elongated openings 10 10, formed upon each side of the box at both its upper and lower ends, and through the tie-bar 11. The bolts are preferably provided with squared portions 12 in those parts which move within the elongated openings, which openings permit the travel of the spacing-bolts and limit such travel. These squared portions also enable the side bolts to act as spacers between the arch-bars and the tie-bars. The upper and lower ends of the bolts are provided with the usual nuts 13 and lock-nuts 14.

Instead of cutting the roller-recesses into the body of the lower arch-bar I may use a wear-plate, which is set in a recess in this arch-bar. Thus in Figs. 6 and 7 I show the wear-plate 15 set in a transverse recess in the lower arch-bar 5 and secured by countersunk rivets 16. This wear-plate is provided with the concave recesses 6 and is preferably provided with end lips or flanges 17, which project over and engage the side edges of the lower arch-bars.

In operation when the side motion of the truck occurs this side motion will be converted into a vertical motion of the truck through the lifting action of the rollers in the curved groove. Side blows on the wheel-flanges will thus be obviated, preventing their breakage and rapid wear of the wheel-flanges and the rails. The amount of side motion is limited by the upper stops on the journal-box and also by its side openings, which engage the bolts, also by the rising of the tie-bar against the bottom of the journal-box.

The advantages of my invention result from the forming of the roller-grooves within the lower side bar or wear-plate forming a part of it. This construction allows the arch-bars to be placed at the level required by the Master Car-Builders' standard and permits the device to be applied to existing arch-bar trucks. The stop system limits the lateral movement, and the only change necessary in existing trucks is to provide the recesses in the arch-bars. The parts are interchangeable according to Master Car-Builders' requirements, and a strong and efficient construction is afforded.

Variations may be made in the form and arrangement of the journal-box, the arch-bars, rollers, &c., without departing from my invention.

I claim—

1. An arch-bar truck having a lower arch-bar provided with recesses over the journal-

box, and rollers resting in said recesses; substantially as described.

2. An arch-bar truck having a journal-box with roller-recesses in its top, a lower arch-bar having lower recesses mating with the journal-box recesses, and rollers in said recesses; substantially as described.

3. A lateral-motion arch-bar truck having a journal-box provided with top lugs or stops arranged to limit the lateral movement of the arch-bars; substantially as described.

4. A lateral-motion arch-bar truck having a journal-box provided with elongated openings at the side, and arch-bar bolts extending through said openings; substantially as described.

5. A lateral-motion arch-bar truck having a wear-plate set in a recess in the under side of the lower arch-bars, and rollers on which the wear-plate rests; substantially as described.

6. A lateral-motion arch-bar truck having a wear-plate set in a recess in the lower arch-bar and having curved recesses, and rollers within the recesses, resting on the journal-box; substantially as described.

In testimony whereof I have hereunto set my hand.

CHAS. H. READ.

Witnesses:
JOHN MILLER,
H. M. CORWIN.