May 11, 1937. C. L. EASTBURG 2,079,845

TRUCK

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Fig. 1.

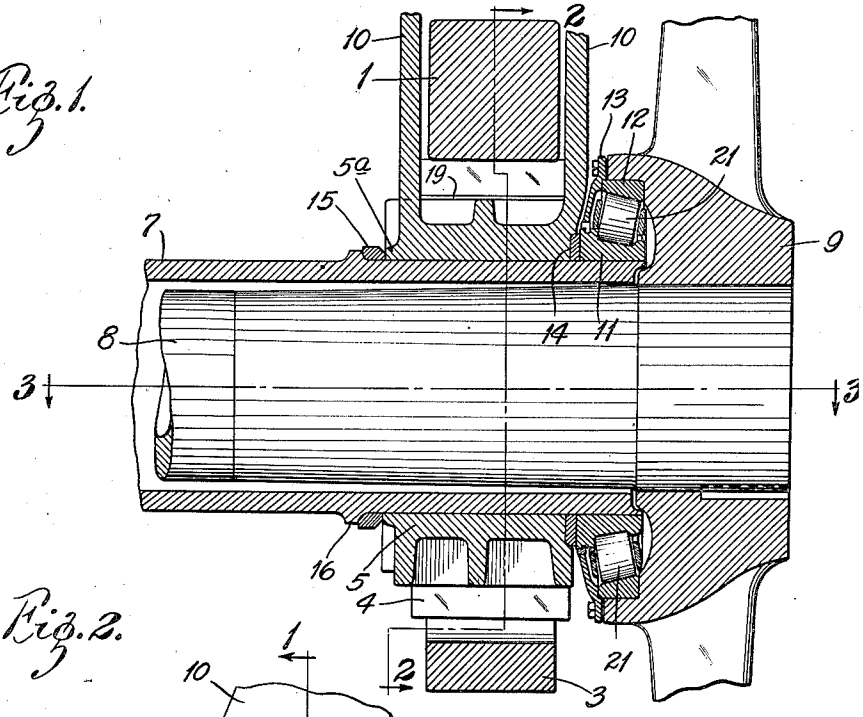
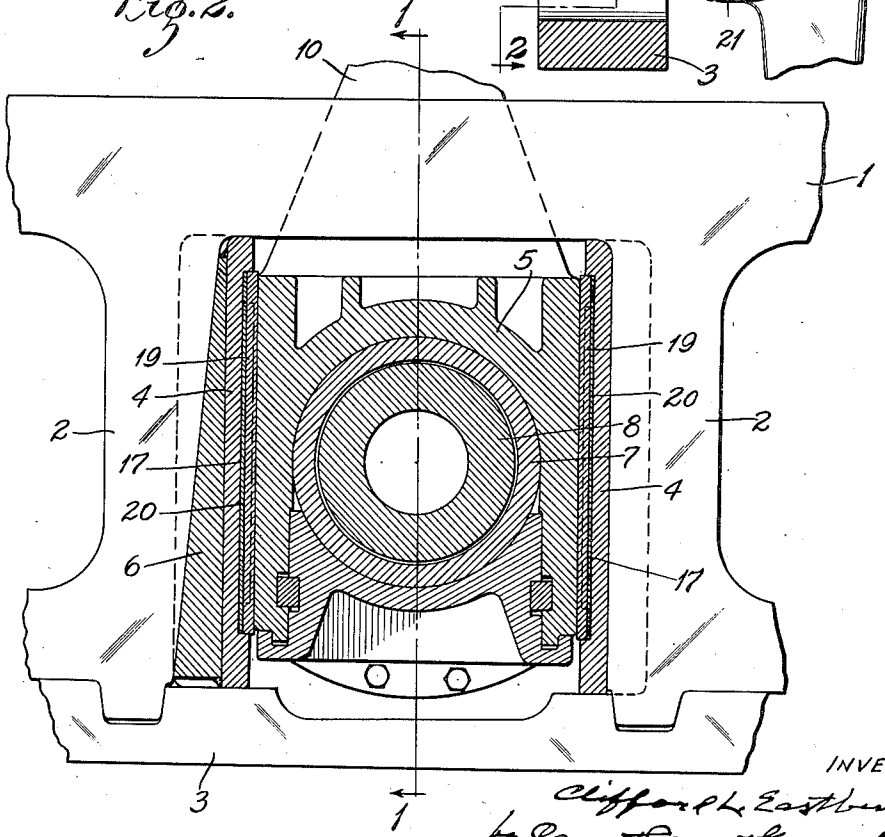


Fig. 2.



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Fig. 3.

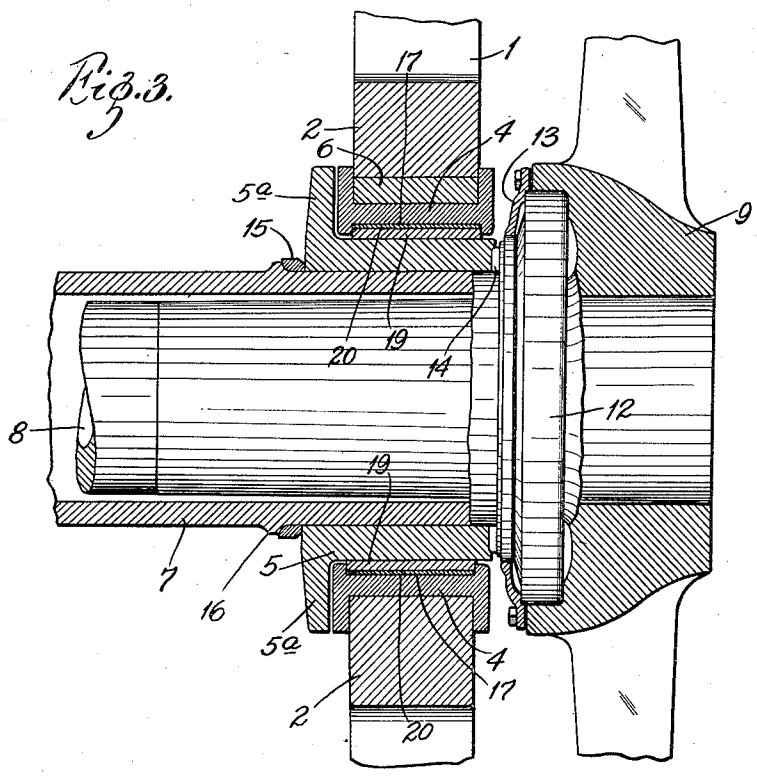


Fig. 8.

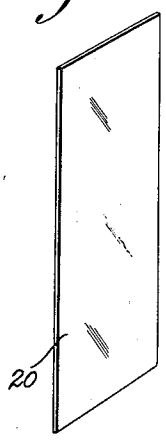


Fig. 4.

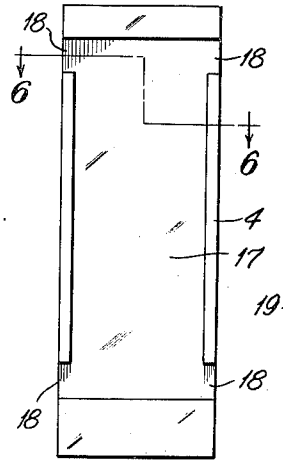


Fig. 5.

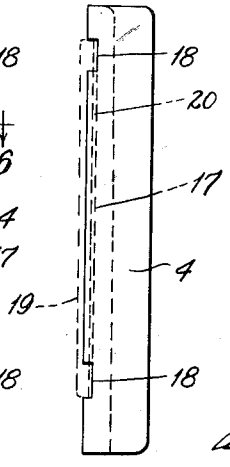


Fig. 6.

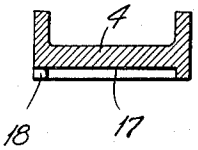
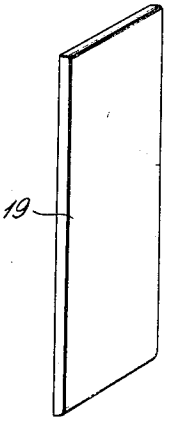


Fig. 7.



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Patented May 11, 1937 2,079,845

UNITED STATES PATENT OFFICE

2,079,845

TRUCK

Clifford L. Eastburg, Canton, Ohio, assignor to The Timken Roller Bearing Company, Canton, Ohio, a corporation of Ohio

Application March 2, 1936, Serial No. 66,625

6 Claims. (Cl. 105—225)

This invention relates to railway car and locomotive trucks of the kind having pedestals equipped with shoes between which the axle boxes are held horizontally but are permitted to slide vertically. The invention has for its principal objects to provide the pedestal shoes with cheap, readily replaceable plates that will take most of the wear caused by sliding friction between the contacting surfaces of the said plates and the axle box, to provide for taking up looseness or play due to wear of said contacting surfaces without changing the tram of the axle, and to dispense with the use of welds or other fasteners for holding the wear plates in place. The invention consists in the truck pedestal shoe and in the construction, combinations and arrangements of parts hereinafter described and claimed.

In the accompanying drawings, which form part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a vertical section through a locomotive truck construction embodying my invention, the section being taken through the truck pedestal and the drive box and roller bearing axle construction associated therewith,

Fig. 2 is a vertical section on the line 2—2 in Fig. 1, the truck side frame being shown in side elevation,

Fig. 3 is a horizontal section on the line 3—3 of Fig. 1,

Fig. 4 is a side elevation of one of the pedestal shoes, showing the wear plate receiving recess in the pedestal box opposing face of the shoe,

Fig. 5 is an edge view of said shoe,

Fig. 6 is a horizontal cross-section through said shoe on the line 6—6 of Fig. 4,

Fig. 7 is a perspective view of one of the wear plates; and

Fig. 8 is a perspective view of one of the wear plate adjusting shims.

In the accompanying drawings, my invention is shown in connection with a locomotive truck comprising a side frame 1 provided with a pedestal 2, a removable tie bar 3 for closing the jaw of the pedestal, channel-shaped shoes 4 that straddle the legs of the pedestal, and a suitable drive or axle box 5 mounted in the pedestal jaw between said shoes. The pedestal shown in the drawings is of the type wherein one leg is provided with an inclined surface adapted to cooperate with a wedge 6 for taking up wear between the axle box and the guide shoe therefor. In the present construction, however, this wedge is welded or otherwise rigidly secured to the pedestal leg and is used only to provide said leg with a vertical guide shoe opposing face. The drive or pedestal box 5 is provided at its inner end with outstanding vertical side flanges 5a that are disposed opposite the inner side flanges of the guide shoes 4 in position to receive the side thrust of the truck. This box is mounted on the adjacent end of a tubular load supporting housing 7 that surrounds a live axle 8 that extends beyond the end of said housing and has a wheel 9 fixed thereto outside of the truck side frame 1. The drive box has a pair of lugs or ears 10 at the top thereof that extend above the side frame 1 on opposite sides thereof and are adapted to support the usual mechanism (not shown) for equalizing the weight on the truck axles.

Interposed between the wheel 9 and the axle housing 7 is a taper roller bearing comprising a cone 11 mounted on the axle housing between the wheel and the pedestal box 5, a cup 12 mounted in a recess provided therefor in the inner face of the wheel center, and conical bearing rollers 21 interposed between said cone and said cup. The space between the cup and cone of the bearing is closed by an annular closure plate 13 that surrounds the large end of the cone and is removably secured at its outer margin to the inner face of the wheel center. Relative endwise movement of the pedestal box and axle housing is prevented by a ring 14 mounted on the housing between the bearing cone 11 and the outer end of said box and a ring 15 mounted on said housing between the inner end of said box and an exterior thrust rib 16 formed on said housing.

According to the present invention, the pedestal box opposing face of each guide shoe 4 is provided with a rectangular recess 17 and grooves or channels 18 that extend from the vertical side edges of said surface and open into said recess through the side walls thereof at their upper and lower ends. Seated in said recess is a rectangular wear plate 19 adapted to contact with the opposing side face of the pedestal box, said plate being made of bronze or other soft metal so as to allow most of the wear to occur thereon. The wear plate is made thick enough to project beyond the pedestal box opposing face of the shoe and extends above and below the face of the pedestal box in contact therewith so as to prevent wearing of shoulders in the shoe above and below the plate receiving recess therein. The plates are adjusted to compensate for wear thereof by means of rectangular shims 20 that seat within the plate receiving recess in the shoes back of said plate.

By the arrangement described, most of the

wear due to the sliding friction between the pedestal box and the wear plates is taken by the latter; and the play or looseness resulting from such wear is taken up by placing shims of proper thickness in the bottoms of the wear plate recesses in the pedestal shoes. These shims may be distributed on opposite sides of the drive box so that the proper tram of the engine is maintained. Removal of the pedestal tie bar permits the guide shoes to drop from the pedestal jaw. The recesses serve to hold the wear plates and shims in proper position in the shoe without the use of welds or separate fastening members. The extensions at the corners of the recesses simplify the operation of machining the recesses; and they also enable a tool to be inserted back of the wear plates or shims to pry the same from the recesses.

Reference is hereby made to my co-pending application Serial No. 63,854 filed February 14, 1936, for subject matter shown but not claimed herein.

What I claim is:

1. A truck comprising a pedestal, a box located in the jaw of said pedestal, guide shoes interposed between the opposing sides of said pedestal and said box, the box opposing sides of said shoes being provided with recesses, and wear plates seated in said recesses and adapted to engage the adjacent sides of said box, the box opposing sides of said shoes having openings therein extending from one edge of said shoes through the adjacent walls of the recess therein.

2. A truck comprising a pedestal, a box located in the jaw of said pedestal, guide shoes interposed between the opposing sides of said pedestal and said box, the box opposing sides of said shoes being provided with recesses, wear plates seated in said recesses and adapted to engage the adjacent sides of said box, the box opposing sides of said shoes having openings therein extending from one edge of said shoes through the adjacent walls of the recess therein and adjusting shims seated in said recesses back of the wear plates therein.

3. A truck comprising a pedestal, a box located in the jaw of said pedestal, guide shoes interposed between the opposing side faces of said pedestal and said box, the box opposing sides of said shoes being provided with recesses, and wear plates seated in the respective recesses in engagement with the adjacent sides of said box, the upper and lower end portions of said recesses extending clear across the box opposing sides of said shoes.

4. A truck comprising a pedestal, a box located in the jaw of said pedestal, guide shoes interposed between the opposing side faces of said pedestal and said box, the box opposing sides of said shoes being provided with recesses, wear plates seated in the respective recesses in engagement with the adjacent sides of said box, the upper and lower end portions of said recesses extending clear across the box opposing sides of said shoes, and shims seated in the bottoms of said recesses back of said wear plates.

5. A pedestal shoe having a recess in its pedestal box opposing side and a wear plate seated in said recess, and the upper and lower portions of said recess extending clear across said side of said shoe.

6. A pedestal shoe having a rectangular recess in its pedestal box opposing side, a rectangular wear plate seated in said recess, said recess being extended at the corner portions thereof to the side edges of said shoe, and rectangular adjusting shims seated in said recess back of said wear plates.

CLIFFORD L. EASTBURG.