

(No Model.)

W. W. WOOLL.
SIDE BEARING FOR CARS.

No. 495,688.

Patented Apr. 18, 1893.

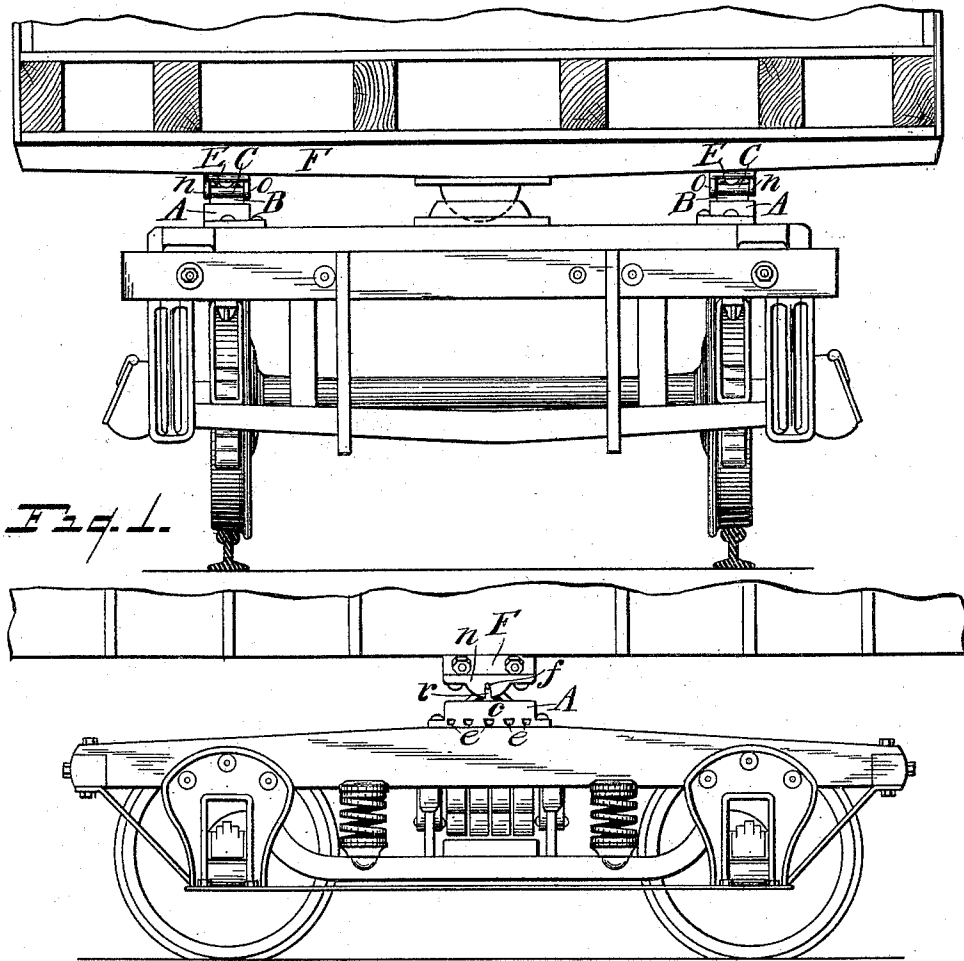


Fig. 1.

Fig. 2.

Fig. 3.

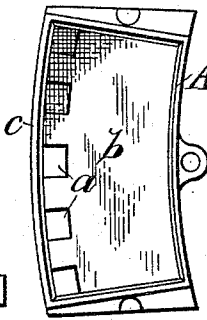
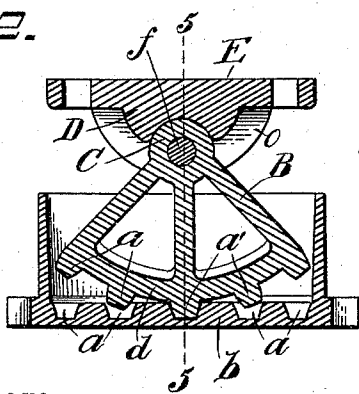


Fig. 4.

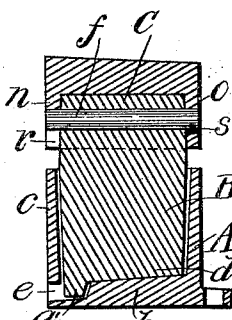


Fig. 5.

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SIDE BEARING FOR CARS.

SPECIFICATION forming part of Letters Patent No. 495,688, dated April 18, 1893.

Application filed June 6, 1892. Serial No. 435,638. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. WOOLL, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Side Bearings for Cars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in side bearings for cars, and consists in a certain construction and arrangement of parts, as hereinafter fully set forth, the essential features of which being pointed out particularly in the claims.

The object of the invention is to provide a side bearing that shall be inexpensive, strong and durable, and in which the construction is such as to reduce the friction between its bearing parts to the minimum; and a further provision whereby the movable friction relieving portion of the bearing, oscillates in the arc of a circle concentric with the pivotal point on which the trucks turn, to enable the trucks to readily adjust themselves when rounding a curve in the track. This object is attained by the mechanism illustrated in the accompanying drawings;—in which—

Figure 1 is an end elevation of a car provided with my improved side-bearing. Fig. 2 is a side elevation of Fig. 1. Fig. 3 is an enlarged longitudinal section through the bearing. Fig. 4 is an enlarged plan view of the lower bearing case. Fig. 5 is a transverse section on dotted line 5—5 of Fig. 3.

Referring to the letters of reference, A indicates the lower cup or case of the bearing. Said case is quadrilateral and slightly curved in form, is open at the top, and is provided with an inclined bottom *b* which slopes toward the outwardly curved wall *c* of said case, through the base of which a series of apertures *e* is formed, that communicate respectively, with a series of depressions *a* in the bottom of the case along the line of said wall, as clearly shown in Figs. 3, 4 and 5. One each of these lower bearing plates or cases A

are secured, in any suitable manner, to the transom or frame of the truck, on each side thereof. The curve of said cases coinciding with the arc of a circle concentric with the pivotal point of the trucks and equal in diameter to the distance between said points of bearing.

B indicates the quadrant rocker which is curved horizontally, to coincide with the case A in which it is freely received. The circular tread *d* of said rocker being slightly beveled and provided at the outer edge thereof with a series of cogs or teeth *a'* that register with and enter the depressions *a* in the bottom of said case, as said rocker oscillates, shown in Figs. 3 and 5, whereby the rocker is retained truly in its place and held from frictional contact with the sides of the case. The apex of the rocker B, is provided with a journal C that lies in a concaved bearing D in the under face of the cap plate E, which is secured to a bottom cross-beam F of the car, as shown in Figs. 1 and 2 and which is also curved to conform to the case A. Depending from the sides of the cap E are the flanges *n*, *o* respectively. The flange *n* is provided with an open vertical slot *r*, and the flange *o* with a vertically elongated aperture *s*, as shown in Fig. 5, and which receive the ends of the pin *f* passing through the journal C of the rocker. By which means the cap is allowed to raise some distance from the journal of the rocker, or tip thereon, as the springs on the opposite side of the truck are depressed, permitting the bearings to draw apart to accommodate the swaying of the car. Instead, however, of employing the pin *f* passing through the journal of the rocker, to retain the cap in place, lugs or trunnions may be formed on the ends of said journal, to enter the apertures in the flanges of said cap.

It will now be seen, that, by the use of this improved bearing, the trucks may readily adjust themselves to the curve of the track. The rockers oscillating in the arc of a circle concentric with the pivot or swivel of the trucks, overcome the contact of rubbing surfaces, and almost entirely obviate the friction between the bearing parts.

The inclined bottom of the case causes any substance falling therein to work into the depressions *a* and out through the communicat-

ing apertures *e*; thus keeping the case free from dirt or obstructing matter.

Having thus fully set forth my invention, what I claim as new, and desire to secure by

5 Letters Patent, is—

1. In a side bearing, the combination of the lower bearing plate having depressions therein, the upper bearing cap, the rocker interposed between said plate and cap, and having
10 the lugs or teeth that enter the depressions in said plate.

2. In a side-bearing, the combination with the centrally pivoted truck-frame, of the segmental side bearing plates curved concentric
15 with the pivotal point of said frame; the horizontally curved rockers corresponding with the curve of said plates and treading thereon, and adapted to oscillate in the arc of a horizontal circle and the cap-plates supported on
20 said rockers.

3. In a side bearing, the combination of the lower bearing plate circular in form and having the depressions therein, the curved rocker conforming to the circle of said plate and having
25 teeth that enter the depressions therein, and the cap plate supported on said rocker.

4. In a side bearing, the combination of the lower bearing case having depressions in the bottom thereof, the side of said case having
30 apertures communicating with said depressions, the rocker in said case having teeth that enter the depressions in the bottom thereof, and the cap-plate supported on said rocker.

5. In a side bearing, the combination of the
35 lower bearing case having an inclined bottom and openings through the case leading from said bottom, the rocker having a beveled tread

located in said case, and the cap supported by said rocker.

6. In a side bearing, the combination of the
40 lower circular bearing plate having an inclined bearing face, the curved rocker having a beveled tread, the cap plate supported on said rocker, substantially as set forth.

7. In a side bearing, the combination of the
45 lower bearing case circular in form, the curved quadrant rocker adapted to oscillate therein, and having a journal on the apex thereon, the curved cap having a concave bearing in its under face that receives the journal of said
50 rocker.

8. In a side bearing, the combination of the lower bearing plate, having depressions therein the quadrant rocker treading thereon provided with teeth that enter said depressions
55 and having a journal at its apex, the cap plate bearing on the journal of the rocker and having the depending flanges, and the pin passing through said journal and flanges.

9. In a side bearing, the combination of the
60 lower bearing plate, the quadrant rocker treading thereon and having a journal at its apex, and pins extending horizontally therefrom the cap plate having a bearing that receives the journal on the rocker and having
65 the depending side flanges provided with vertical slots, the pins on the rocker lying in said slots, substantially as specified.

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

WILLIAM W. WOOLL.

Witnesses:

E. S. WHEELER,
H. R. WHEELER.