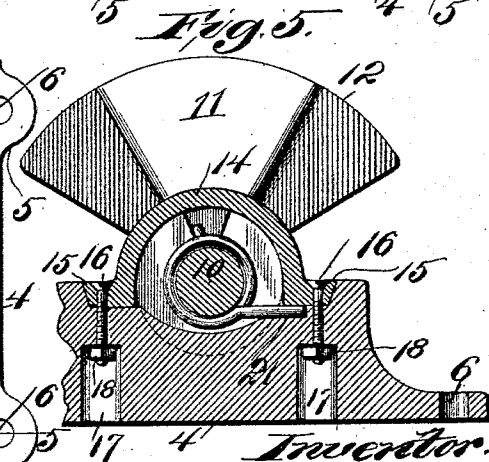
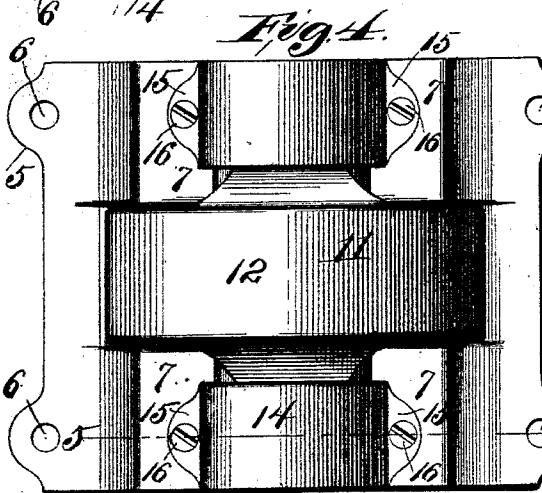
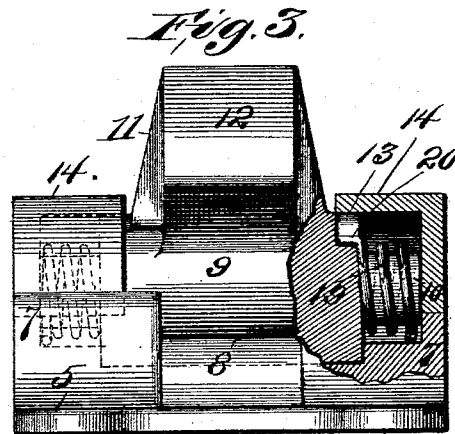
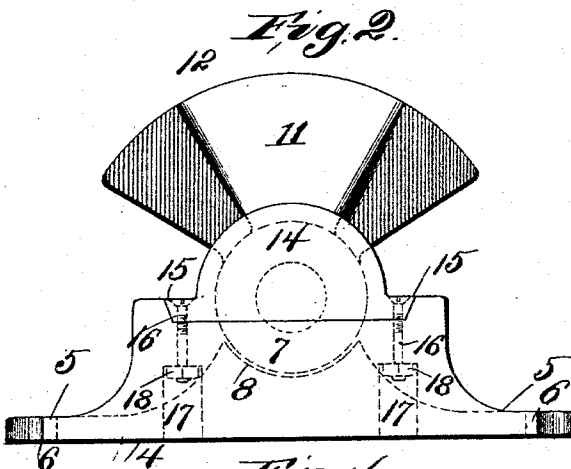
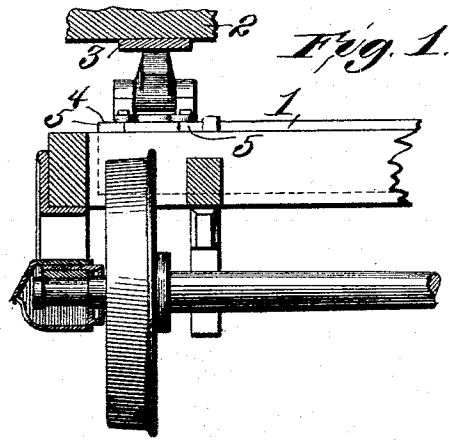


(No Model.)

J. C. WANDS.
SIDE BEARING FOR RAILWAY CARS.

No. 533,764.

Patented Feb. 5, 1895.



Witness:
W. H. Smith.
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UNITED STATES PATENT OFFICE.

JOHN C. WANDS, OF ST. LOUIS, MISSOURI.

SIDE BEARING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 533,764, dated February 5, 1895.

Application filed November 21, 1894. Serial No. 529,499. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WANDS, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Side Bearings for Railway-Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to a side bearing for railway cars, the object of my invention being to construct an extremely simple and inexpensive bearing in the form of a quadrant that is especially applicable for the lighter class of railway cars, such as flat or coal cars.

My invention consists of a suitable cast base that is adapted to be bolted to the top truck bolster, a quadrant provided with trunnions and mounted in said base, and springs for centering the quadrant and bringing it to its normal position.

My invention further consists in certain novel features of construction, combination and arrangement of parts, hereinafter described and claimed.

In the drawings: Figure 1 is an elevation of a portion of the top car bolster, the same having my improved bearing mounted thereon. Fig. 2 is a side elevation of my improved bearing. Fig. 3 is an elevation of the bearing, portions thereof being broken away to more clearly illustrate the same. Fig. 4 is a top plan view of the bearing. Fig. 5 is a longitudinal sectional view taken approximately on the indicated line 5—5 of Fig. 4.

Referring by numerals to the accompanying drawings, 1 indicates the top bolster of a car truck, and 2 the transom that is carried by the car body, and has rigidly bolted to the under side thereof the bearing-plate 3.

4 indicates the base-plate of my improved bearing, the same being provided with integral ears 5 through which pass apertures 6, thus forming means for rigidly bolting the base upon the truck bolster. Formed integral with the base 4 and extending upwardly therefrom on each side of the base are bearings 7, between which and in the base 4 is formed a concave-bearing surface 8.

Mounted for rotation between the upwardly extending bearing 7 and in the concave bearing surface 8 is a shaft 9, provided on its ends with circular lugs or trunnions 10. Formed

integral with the shaft 9, and extending vertically upward between the bearings 7 is a quadrant bearing 11, the same having a smooth periphery 12.

Formed in the ends of the shaft 9 and communicating with the top edge of said shaft are segmental recesses or cutaway portions 13. Semi-circular caps 14 are provided with integral ears 15 and engaged directly upon the ends of the shaft 9 over the trunnions 10, and are rigidly secured to the bearings 7 by means of bolts 16, said bolts passing downwardly through the bearings 7 and into recesses 17 formed therein. Here they are provided with ordinary nuts 18.

Differentially wound coil-springs 19 have their inner ends 20 bent into horizontal planes, and located in the segmental recesses 13 formed in the ends of the shaft 9. The bodies of these coil-springs are wound around the trunnions or circular lugs 10 formed on the ends of the shaft 9 and extend from thence to recesses 21 formed in the base 4 immediately beneath the caps 14.

In the practical use of my improved side bearing, the weight of the car body rests entirely upon the center bearing of the truck bolster, thus avoiding any torsional strain of said truck bolster. The bearing-plates 3 fixed to the under side of the car transom bear directly upon the periphery 12 of the quadrant bearing 11, and said bearings are only moved when the car rounds a curve or is jolted or moved laterally a sufficient distance to affect said quadrant. The coil-springs 19 for centering or bringing the bearing to a normal position are brought into action only when the quadrant is moved to its extreme limit. As the movement of said springs is very slight, it will be seen that they will last an indefinite length of time. Said springs being differentially wound upon the trunnions 10, only one spring at a time is brought into action. When the car tilts or leaves the quadrant bearing on one side of the car, said bearing will be brought, by the action of the resilient spring, to its normal position to again receive the bearing-plate 3 on the transom 2 that is carried by the car body.

I am aware that quadrant side-bearings have been made with cogs or teeth meshing with a rack, but it has been found that said

cogs and racks do not always register or mesh after a tilted car rights itself, thereby rendering such bearings unserviceable. Thus it will be seen how I have constructed a side bearing that may be very cheaply constructed, said side bearing being especially applicable for cheaper and lighter built cars.

What I claim is—

1. A side bearing, comprising a base, bearings formed integral with said base, a shaft mounted in said bearings and provided with laterally extending integral trunnions, a quadrant having a smooth periphery formed integral with the shaft, and differentially acting springs located upon the trunnions for centering or bringing the quadrant to its normal position.

2. The combination of a car truck, and a side bearing comprising a base rigidly mounted upon the truck bolster, bearings formed integral with said base, a shaft mounted transversely in said bearings, a quadrant having a smooth periphery formed integral with said shaft, and differentially wound springs mounted upon trunnions formed integral with the ends of the shaft for centering or bringing the quadrant to its normal position.

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

JOHN C. WANDS.

Witnesses:

E. E. LONGAN,

JNO. C. HIGDON.