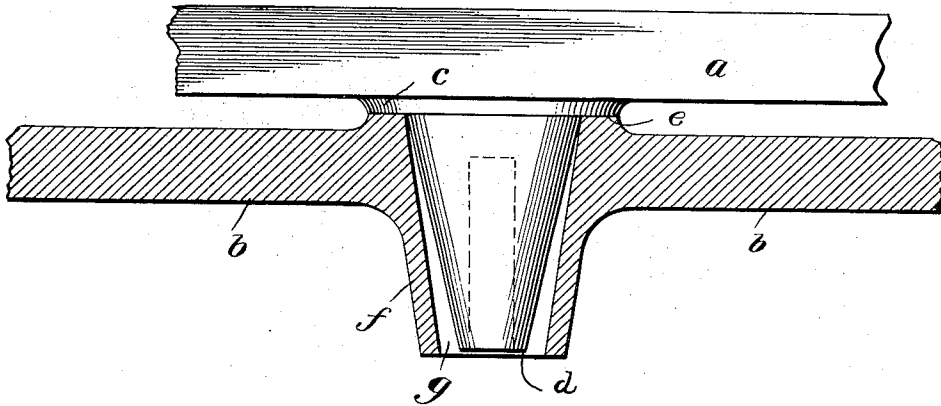


G. E. ANDREWS.  
CENTER BEARING FOR RAILWAY CARS.  
APPLICATION FILED JULY 10, 1912.

1,041,946.

Patented Oct. 22, 1912.



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# UNITED STATES PATENT OFFICE.

GEORGE EWING ANDREWS, OF SANTA ROSA, CALIFORNIA.

CENTER-BEARING FOR RAILWAY-CARS.

1,041,946.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed July 10, 1912. Serial No. 708,605.

*To all whom it may concern:*

Be it known that I, GEORGE E. ANDREWS, a citizen of the United States, and a resident of Santa Rosa, county of Sonoma, State of California, have invented certain new and useful Improvements in Center-Bearings for Railway-Cars, of which the following is a full and clear specification, reference being had to the accompanying drawings, in which is illustrated a vertical sectional view of one form of my invention with only sufficient adjacent parts of the body and truck bolsters illustrated to show the application of the invention.

This invention relates to an improved center bearing for railway cars both freight and passenger.

The object of the invention is to provide a center bearing for railroad cars of a simple, efficient, durable and strong construction, which is not subject to the disadvantages of the present construction.

My invention consists, in its preferred construction, of an upper circular bearing, formed integrally with or secured to the body-bolster, having a central downwardly tapering conical pivot and a lower circular bearing on the truck-bolster having a central conical seat therein converging downwardly and adapted to receive the conical pivot on the upper plate, for the purposes hereinafter set forth.

Heretofore generally in the construction of center bearings it has been the practice to secure the upper center plate to the body bolster, the lower center plate to the truck bolster, and to hold the truck to the car frame by a king bolt passing through the plates, on which as a pivot the truck turns. But in such construction there was no provision made for the movement of the truck or the car body vertically, such as would be caused by unevenness of the road-bed or the swaying of the car; in consequence of which the king-bolt is subjected to continual strain, with the effect in time to weaken the metal and finally break the bolt. This is particularly the case in freight cars, where few springs are used on the truck and the entire shock is sustained by the king bolt.

The purpose of this invention is to provide a center bearing in which the king bolt will be dispensed with, and the oscillating

motion of the car-body in any plane will be taken up or resisted without danger of breaking the bearing or causing it to bind.

In the drawing annexed, *a* designates a portion of the body bolster, which may be constructed in any suitable manner and may be a bolster for passenger cars or for freight cars, and *b* designates a portion of the truck bolster which also may be of any usual or improved construction. Attached to or formed as an integral part of the body bolster is a downwardly facing circular bearing *c* depending concentrically from which is a downwardly tapering pivot *d*. On the upper face of the truck bolster is a circular, upwardly-facing bearing *e* which forms a companion bearing for the bearing *c*. The cone depends into a cup or socket *f* carried by the truck bolster and preferably formed integral therewith. The base of the conical cone *d* fits the upper end of the socket *f* but owing to the difference in taper between the external surface of the cone and the internal surface of the socket or cup, the body of the cone does not under normal conditions contact with the inner face of the socket, there being a downwardly-flaring space *g* between the pivot and the socket. As shown in dotted lines the cone may be hollowed out for the purpose of lightness, and preferably both the cone and the socket depend to a point below the body of the truck bolster.

The contacting faces of the circular bearings *c* and *e* are machined to afford a smooth broad bearing for the body bolster on the truck bolster, allowing the parts to have a relative horizontal pivotal movement. The clearance *g* between the cone and the conical socket allows the body bolster and upper bearing *c* to rock on the truck bolster without subjecting the cone to strain. As the greater strain on the king bolt (when that construction is used) occurs at the line between the upper and lower center plates or bearings, the base of the cone in the present improvement is situated at that point, where the greatest strain occurs, and from that point downward the cone has a proportionate reduction in thickness; by virtue of this peculiar form the cone has the capacity for sustaining strain or stress thrown on it under all conditions or directions of motion of the car body.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is—

In combination with a truck bolster carrying a downwardly facing circular center bearing, said center bearing having a central downwardly tapering cone, of a truck bolster having an upwardly facing center bearing surrounding the upper open end of a  
10 downwardly tapering cup or socket into

which said cone depends, there being a downwardly flaring clearance between the cone and the inner wall of the socket, for the purposes set forth.

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

GEORGE EWING ANDREWS.

Witnesses:

CONRAD KOCH,  
W. S. DAVIS.