

(No Model.)

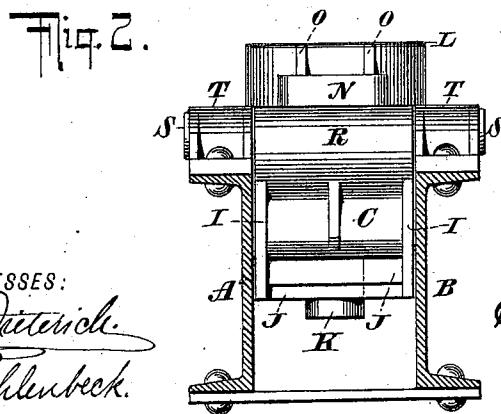
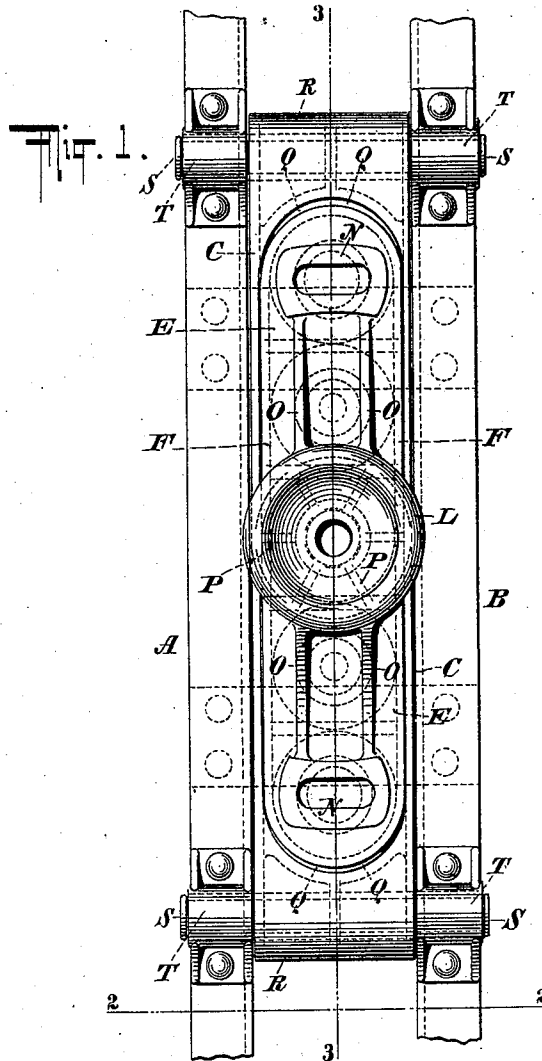
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E. CLIFF.

CENTER BEARING BOLSTER ATTACHMENT FOR CAR TRUCKS.

No. 578,135.

Patented Mar. 2, 1897.



WITNESSES:
Gustave Dietrich.
John Kehlenbeck.

INVENTOR
Edward Cliff,
BY
Chas. C. Gill
ATTORNEY.

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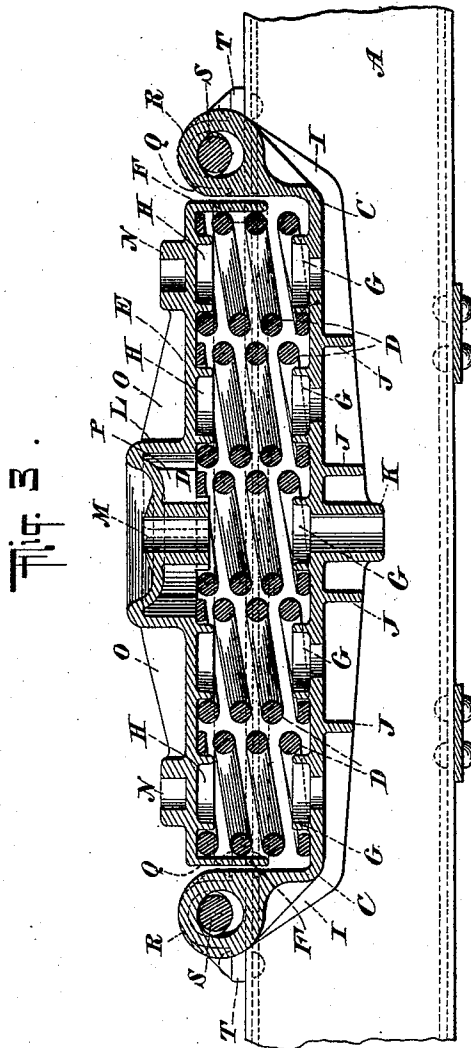
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UNITED STATES PATENT OFFICE.

EDWARD CLIFF, OF NEWARK, NEW JERSEY.

CENTER-BEARING-BOLSTER ATTACHMENT FOR CAR-TRUCKS.

SPECIFICATION forming part of Letters Patent No. 578,135, dated March 2, 1897.

Application filed December 11, 1896. Serial No. 615,277. (No model.)

To all whom it may concern:

Be it known that I, EDWARD CLIFF, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Center-Bearing-Bolster Attachments for Car-Trucks, of which the following is a specification.

The invention relates to an improved center-bearing-bolster attachment for car-trucks; and it consists in the novel features and combinations of parts hereinafter described, and particularly pointed out in the claims.

The invention comprises a yielding center bearing applied to the transverse beams of a car-truck, said center bearing being in itself yielding and adapted to have lateral play, while at the same time it is mounted upon transverse rollers or shafts which permit of lateral play in the center bearing as a whole and are adapted to return to their normal position.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a top view, partly broken away, of the transverse beams or transoms of a car-truck having applied thereto the yielding center bearing constructed in accordance with and embodying the invention. Fig. 2 is a transverse section of same on the dotted line 2 2 of Fig. 1, and Fig. 3 is a central longitudinal section of same on the dotted line 3 3 of Fig. 1.

In the drawings, A B respectively designate the transverse beams or transoms of a car-truck. In the present instance these beams or transoms A B are formed of channel-iron and extend from one side to the other of the car-truck, said sides being omitted from the drawings for the reason that the truck in itself forms no part of the present invention.

Between the beams A B is mounted the center-bearing frame or body or casing C, containing the series of springs D and provided with the cap E, whose vertical edge flange F passes downward within the casing C and incloses the upper portion of the springs D. The casing C is in the form of an elongated receptacle partly suspended between the beams A B and having upon the upper face

of its base the annular flanges G, upon which the springs D are centered, as shown in Fig. 3. The cover E for the casing C is provided upon the lower side of its top with the annular flanges H, which correspond in outline and position with the annular flanges G and enter the upper ends of the coiled springs D. The casing C is formed with the longitudinal web-flanges I and transverse depending flanges J, which connect the side web-flanges I, and said casing C at its center is provided with the sleeve K for the reception of the king pin or bolt. The cap or cover E for the casing C is formed at its center with the raised portion L to receive the rubbing-plate on the car-body, and which raised portion is formed with the sleeve M in alinement with the sleeve K and to receive the king pin or bolt. Adjacent to the ends of the top or cover E are formed the transverse raised rubbing-surfaces N, and intermediate these rubbing-surfaces N and the central raised portion L there extend the longitudinal outwardly and downwardly inclined web-flanges O. Within the central raised portion L are formed radial ribs P, (shown by dotted lines in Fig. 1,) which connect the sleeve M with the inner vertical walls of the said raised portion L, these ribs affording proper strength and furnishing a bearing-surface at their lower edges for the upper end of the middle spring D, whose upper end, as shown in Fig. 3, does not pass upward into the said raised portion L. The elevations to form the rubbing-surfaces N N are slightly segmental in outline to receive the impact or thrust of the car-body.

It will be obvious, of course, that the top or cover E, being mounted upon the springs D, will furnish a yielding bearing for the car-body, and in view of the fact that the spaces Q are left between the ends of the top or cover E and the ends of the casing C the said top or cover E in addition to yielding vertically may yield laterally under the action of the car-body, the flanges G H preventing any tendency of the springs D to lose their position under any lateral thrust of the top or cover E. The ends of the top or cover E and the adjoining surfaces of the casing C are curved in outline, as shown in Fig. 1, while the longitudinal sides of the top or cover E and the adjoining portions of the casing C form par-

allel straight edges, which serve to guide the said top or cover E and the casing C upon one another. The top or cover E is, however, slightly shorter than the receiving portion of the casing C, and hence there are formed at the ends of the top or cover E the above-mentioned spaces Q, which permit of a lateral movement of the top or cover E within the casing C. Thus the top or cover E is adapted to have a vertical yielding movement upon the springs D and is guided by the casing C, and at the same time may have a lateral movement in either direction within said casing.

While I do not in every instance limit the invention to the securing of the casing or body C by means which will permit it to have a lateral movement, I prefer that the said casing C be mounted upon rollers or shafts which will admit of a limited movement in said casing C in a lateral direction, and to this end there are formed upon the ends of the casing C the sleeves R R, which extend transversely the full width of the casing C and receive the shafts or rollers S S, whose ends are journaled in the bearings T T, rigidly secured to the upper flanges of the channel-beams A B. The sleeves R R have a bore of substantially greater diameter than the diameter of the shafts or rollers S, and the bearings T T have a bore of substantially greater diameter than the diameter of the shafts S S, and hence when the parts are in the position illustrated the casing C at its bearings or sleeves R will loosely rest upon the upper portion of the horizontal shafts or rollers S S, while the ends of said shafts or rollers S S will bear directly upon the lower portion of the bearings T T, as illustrated more clearly in Fig. 3. By reason of the means just described for securing the casing C to the transverse beams A B the said casing will be permitted to have a lateral traveling movement of limited extent under the lateral thrust of the car-body, and during this movement the said casing C will roll with the said shafts or rollers S, and the latter will be checked in their traveling movement by reason of the fact that they will be compelled to ride up the curved or inclined sides of the bearings T, which curved or inclined sides will also return said shafts or rollers S S to their normal central position illustrated in Fig. 3.

The car-body may with the use of the invention made the subject hereof have a definite vertical spring or yielding action on vertical lines and also a definite lateral thrust with the top or cover E, and in addition thereto a further lateral thrust by reason of the means shown for securing the casing C to the rigid beams A B. The center-bearing plate on the car-body will engage the top of the central raised portion L of the cover E, and during any tilting of the car-body the elevated rub-

bing-surfaces N will serve as side bearings for said body. While the said bearings or rubbing-surfaces N are formed of rigid material, they are mounted over the springs D, and hence the car-body will possess in the use of the bolster described yielding side bearings as well as a yielding center bearing. The particular form of the top or cover E along its edges is such as to admit of said cover having a slight tilting motion when necessary within the casing C.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The elongated casing C and the elongated top or cover E thereon, combined with the springs held between said casing and cover, and means for permitting the said casing to have a lateral movement with the car-body, said casing, cover and springs constituting a center bearing adapted to receive the king pin or bolt connected with the car-body; substantially as set forth.

2. The center-bearing bolster comprising the elongated casing, the series of springs therein and the top or cover for said casing and provided with the center-bearing surface, said top or cover being adapted to have a lateral movement within said casing, combined with means securing said casing to the beams A, B, and permitting said casing to have a lateral movement; substantially as set forth.

3. The center-bearing bolster comprising the casing having sleeves at its ends, the springs within said casing and the top or cover for said casing and springs, combined with the bearings secured to the truck-frame and the transverse shafts or rollers entering said sleeves and bearings; substantially as set forth.

4. The center-bearing bolster comprising the casing inclosing the springs and having a yielding top or cover to receive the car-body, combined with the end bearings on said casing, the transverse shafts passing through said bearings and the rigid bearings to receive the ends of said shafts, the said end bearings and the said rigid bearings being out of central alinement with one another; substantially as set forth.

5. The center bearing comprising a casing, springs therein, and a cover mounted on said springs and adapted to receive the car-body and king-pin, combined with means securing said casing and permitting the same to have lateral motion toward either side of the car-truck; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 9th day of December, A. D. 1896.

EDWARD CLIFF.

Witnesses:

CHAS. C. GILL,
E. JOS. BELKNAP.