

G. G. FLOYD.
RAILWAY CAR TRUCK.
APPLICATION FILED FEB. 15, 1908.

924,652.

Patented June 15, 1909.
2 SHEETS—SHEET 1.

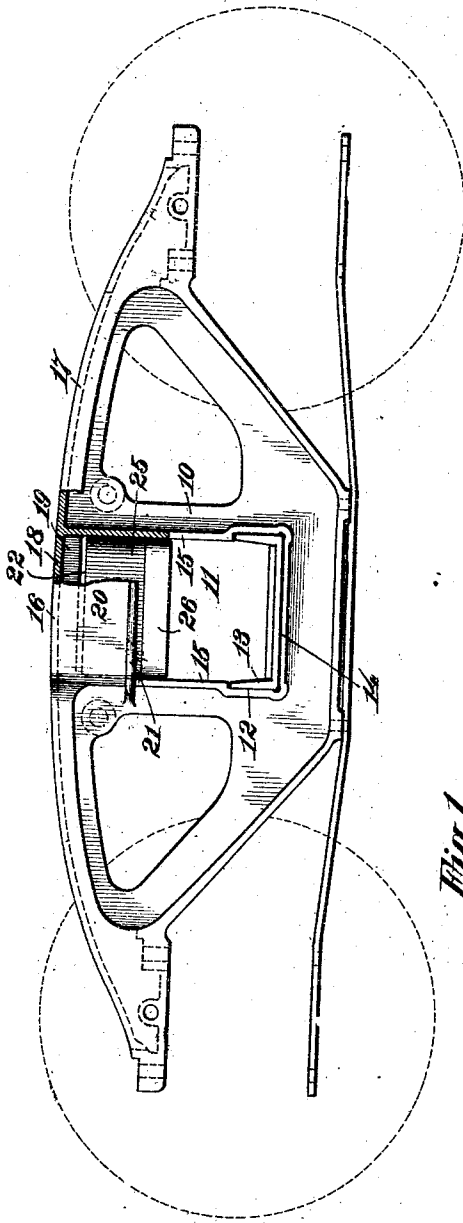


Fig. 1.

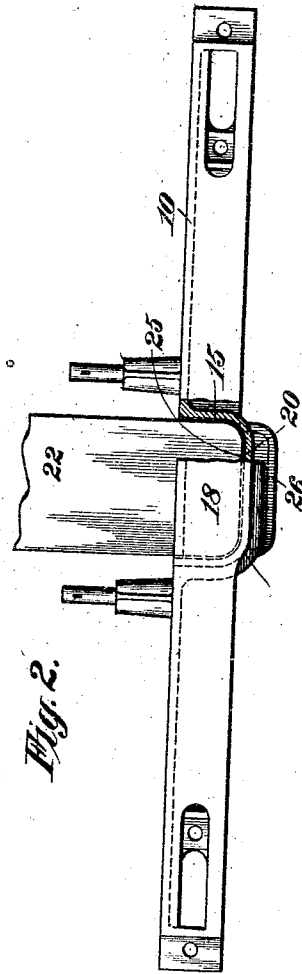


Fig. 2.

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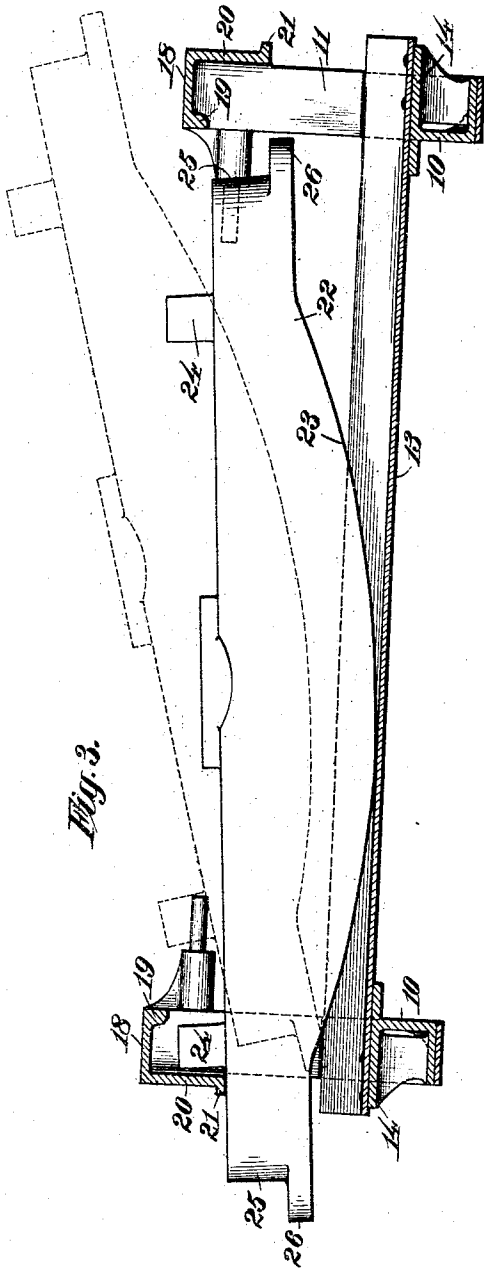


Fig. 3.

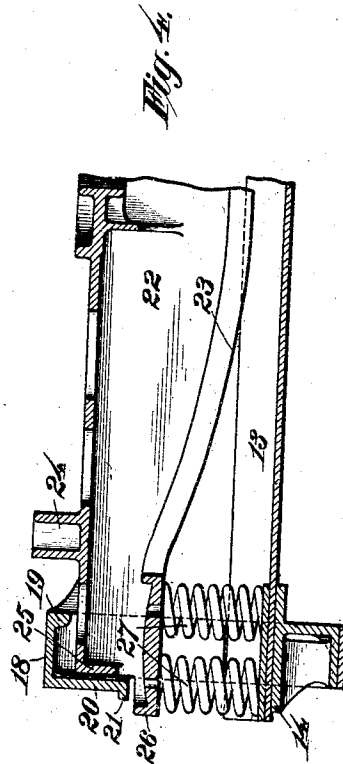


Fig. 4.

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UNITED STATES PATENT OFFICE.

GEORGE G. FLOYD, OF GRANITE, ILLINOIS, ASSIGNOR TO AMERICAN STEEL FOUNDRIES,
OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

RAILWAY-CAR TRUCK.

No. 924,652.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed February 15, 1908. Serial No. 416,073.

To all whom it may concern:

Be it known that I, GEORGE G. FLOYD, a citizen of the United States, residing at Granite, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Railway-Car Trucks, of which the following is a specification.

It has been proposed heretofore to provide for the ready removal of a railway car-truck bolster from the truck by supplying the bolster-opening in the side-frame with an enlargement of sufficient size to permit withdrawal of the bolster therethrough.

The object of the present invention is to arrive at the same result, that is, easy and ready removal of the bolster, but by means of a quite different construction. Furthermore, in those trucks having the enlarged openings, in order to lower the bolster sufficiently to bring it in line with the enlargement, it is necessary to cut the rivets of and take out the channel spring-plank or pair of angle-bars sometimes employed in its stead. As is obvious, such procedure is objectionable and more or less expensive. My improved construction, on the other hand, obviates all necessity of cutting any rivets or removing the spring-plank or angle tie-bars, the bolster having no column-guides and being removable after the springs have been taken out by tilting or tipping the same until its lower end comes below the flange or guard on one of the side-frames, which normally prevents its lengthwise shifting, whereupon its lowered tipped end may be projected or pushed outwardly through the bolster-opening in the side-frame sufficiently to free the opposite end of the bolster from the other side-frame, after which the bolster may be readily lifted out of the truck, as is obvious.

On the accompanying drawings, forming a part of this specification, I have illustrated a desirable embodiment of my invention, and in the various views like reference characters refer to the same parts.

On the drawings,—Figure 1 is an elevation of my improved car-truck, certain parts being omitted and other parts broken away to more clearly illustrate the construction; Fig. 2 is a plan view of the construction shown in Fig. 1, the bolster and a part of the side-frame being partially broken away; Fig. 3 is a vertical cross-section through the car-truck and illustrates the manner of removing the

truck bolster; and Fig. 4 is a central vertical cross-section through the car-truck, illustrating substantially one-half thereof.

This improved car-truck, as is usual, has two side-frames 10, 10, each of which has a central bolster and spring opening or aperture 11. The central opening 11 of each frame is somewhat enlarged at the bottom at 12 to accommodate the end of a channel spring-plank 13 which is riveted or otherwise desirably fastened to the two side-frames, the web of the spring-plank at each end resting upon the widened spring-seat 14 of the side-frame. The aperture or recess 11 of each frame has at its ends parallel vertical columns 15, 15. The central portion 16 of the upwardly-arched compression member 17 of the frame, that is, that portion over the opening 11, comprises a substantially flat horizontal web or plate 18 having depending from its inner edge or margin a strengthening bulb or enlargement 19. Depending from its outer edge and joining the upper portions of the outer edges of the columns 15 is a flange 20 of considerably greater depth than the bulb or enlargement 19, and provided along its lower edge with an outwardly-extended strengthening rib or flange 21, as will be observed from an inspection of Fig. 4, the plate or web 18 and flange 20 forming a sort of hood for the end portion of the truck bolster 22, whose lower central boundary or margin is curved or convex as at 23. At its opposite ends the bolster has the side bearings 24, and at each end it is also vertically shouldered at 25 whereby there is produced an extension or end proper 26 of considerably reduced depth.

In the normal position of the parts the bolster-springs 27 rest directly or indirectly upon the web of the channel spring-plank 13, bearing on their upper ends the terminal portions of the bolster 22. Under these conditions the reduced ends 26 of the bolster underlie the lower edges of the flanges 20, while the shoulders 25 are disposed inside of the flanges and are adapted to co-act with their inner faces to limit and restrict longitudinal shifting of the bolster. The latter is guided in its vertical reciprocations and movements by the columns 15 which coöperate with the sides of the bolster for this purpose. The bolster, however, is not equipped with any of the usual and customary column-guides.

To remove the bolster from the car-truck, it is merely necessary to take out the springs 27 of the two side-frames, whereupon the bolster may be bodily lowered, and if desired its central curved portion may be permitted to rest upon the channel spring-plank 13. The bolster may then be tipped or rocked sufficiently so as to lower the full depth portion of one of its ends sufficiently to permit it to be pushed or projected outwardly through one of the openings 11 beneath the flange 20, as is indicated in full lines in Fig. 3, until the opposite end of the bolster is freed from its side-frame. The bolster can then be tilted and also shifted longitudinally so as to bring its freed end above the corresponding side-frame, whereupon the opposite end of the bolster may be withdrawn from its side-frame in the manner indicated in dotted lines in Fig. 3. To insert the bolster in place in the truck, it is merely necessary to proceed in substantially the opposite manner from that set forth above for its removal. It will be observed that, owing to the concentration of metal in the enlargement or bulb 19, which occupies but comparatively little space, the hood portion of the side-frame over the opening 11 is permitted to receive and temporarily accommodate the bolster's side bearing 24 during the removal of the bolster, as is shown in full lines in the left-hand portion of Fig. 3. It will be apparent also that, owing to the fact that the coiled bolster-springs 27 are arranged substantially transversely symmetrical with respect to the side-frame, the load imposed thereon through the bolster is properly distributed on the side-frame, and has little, if any, tendency to tilt the frame out of position.

It will be noted from the above description that the truck-bolster may be removed from or inserted in the truck without taking out the spring-plank or cutting any rivets whatsoever. This, as is obvious, is a distinct advantage and saving in time and expense.

Although I have described, with a considerable degree of particularity, the precise structural features of my improved truck, it is to be understood that my invention is not limited to the exact features of construction set forth, and that these may be varied within wide limits without departing from the heart and essence of my invention or sacrificing any of its benefits and advantages.

Attention is directed to the fact that some of the features of the side-frame illustrated on the drawings of this application are claimed in a separate co-pending application. I claim:

1. A railway car-truck side-frame having a central bolster and spring opening and a compression portion or member over said opening connecting the two ends of the side-frame, said compression portion or member

having its lowest part disposed at its outer edge, substantially as described.

2. A railway car-truck side-frame having a central bolster and spring opening and a compression portion or member above said opening connecting the two ends of the frame, said compression portion or member having a depending flange at its outer edge extending downwardly lower than any other part of said compression portion or member, substantially as described.

3. A railway car-truck side-frame having a central bolster and spring opening and a compression portion or member above said opening connecting the two ends of the frame, said compression portion or member having a depending bulb or enlargement along its inner edge and a depending flange along its outer edge, said flange extending downwardly farther than said bulb or enlargement, substantially as described.

4. In a railway car-truck, the combination of a side-frame having a central bolster and spring opening and a compression member above said opening, connecting the two ends of said frame, and having its lowest part at its outer portion, bolster springs, and a bolster resting on said springs and having an end of reduced depth extended outwardly below said lowest part of said compression member, substantially as described.

5. In a railway car-truck, the combination of a side-frame having a central bolster and spring opening and a compression member above said opening, connecting the two ends of the side-frame, and having its lowest part at its outer portion, bolster-springs, and a bolster resting on said springs and having a shouldered end providing an end proper of reduced depth, said reduced part of said bolster extending outwardly beneath said lowest part of said compression member and said shoulder cooperating therewith to prevent lengthwise shifting of the bolster, substantially as described.

6. In a railway car-truck, the combination of a side-frame having a central bolster and spring opening and a compression member above said opening, connecting the two ends of the side-frame, and having at its outer portion a depending flange, bolster-springs, and a bolster resting on said springs and having a shouldered end providing an end proper of reduced depth, said reduced part of said bolster extending outwardly beneath said flange and said shoulder cooperating with the inner surface of said flange and preventing lengthwise shifting of the bolster, substantially as desired.

7. In a railway car-truck, the combination of a side-frame having a central bolster and spring opening and a compression member above said opening, connecting the two ends of the side-frame, and having along its inner edge an enlargement or bulb and along its

outer edge a depending flange, bolster-springs, and a bolster resting on said springs and having a shouldered end providing an end proper of reduced depth, said reduced
5 part of said bolster extending outwardly beneath said flange and said shoulder cooperating with the inner surface of said flange and preventing lengthwise shifting of the bolster, substantially as described.

- 10 8. In a railway car-truck, the combination of a pair of side-frames each having a central bolster and spring opening and a compression member above said opening with an inner longitudinal depending bulb or enlargement
15 and an outer longitudinal depending flange extending downwardly farther than said bulb or enlargement, each of said frames also

having a spring-seat at the bottom of its opening, a spring-plank fastened to said side-frames and resting on said spring-seats, 20 bolster-springs for each of said side-frames, and a bolster resting on said springs and having each of its ends shouldered to provide ends proper of reduced depth, said reduced ends extending outwardly below said de- 25 pending flanges and said shoulders co-acting with the inner faces of said side-frame flanges to limit and restrict lengthwise movement of the bolster, substantially as described.

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