

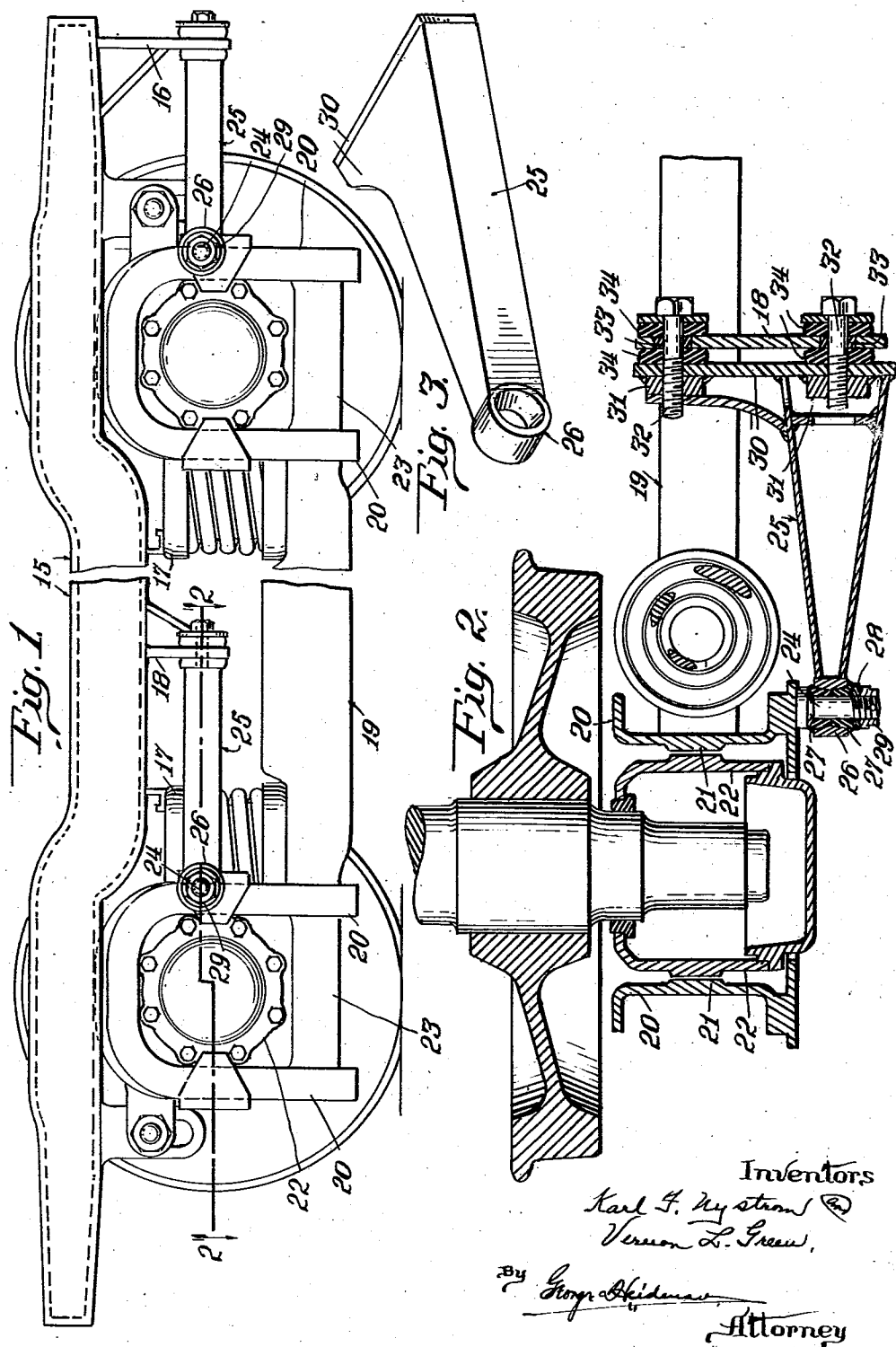
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TRUCK FOR RAILROAD CARS

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TRUCK FOR RAILROAD CARS

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7 Claims. (Cl. 105—194)

Our invention relates to improvements in trucks for railroad passenger cars and is designed to overcome the difficulties and wear encountered with trucks as heretofore constructed and to improve the riding qualities of the trucks.

Our invention contemplates the elimination of the conventional journal bearing receiving pedestals of the truck frame and the provision of combined equalizer and bearing housing receiving units, with means whereby the units and frame are operatively connected through the medium of compressible resilient elements adapted to take care of both longitudinal and lateral, as well as relative vertical movements between the truck frame and said units; said elements being designed to eliminate metal-to-metal contact and hence to eliminate the usual noise resulting from metal-to-metal contacts.

For purposes of exemplification, the invention is shown in connection with a four wheel truck although it is equally adaptable to a truck employing more wheels if desired; and the purpose and advantages of our invention will be readily comprehended from the detailed description of the accompanying drawing wherein:

Figure 1 is a side elevation, with intermediate portions broken away, of our improved truck.

Figure 2 is a longitudinal sectional view taken on the line 2—2 of Figure 1 looking downward and drawn to a larger scale than Figure 1.

Figure 3 is a detail perspective view of one of the drawbars or links.

In the particular exemplification, where a four wheel truck is shown, the truck frame at each side involves the side frame portion 15 and the frame is intended to be supported through the medium of suitable springs on the equalizer units later to be described; the frame adjacent one end being provided with a depending bracket 16 and at the intermediate portion with the spring seats 17, 17. The frame 15, at a point intermediate the spring seats, is provided with a depending bracket 18; the brackets 16 and 18 being rigidly secured to the bottoms of the side beams or members of the frame and the lower ends of the brackets provided with bolt receiving holes. As may be seen in Figure 1, the frame is not provided with the conventional pedestals and therefore has no direct connection with the journal bearing housings as has heretofore been the case.

Disposed beneath the frame 15 is our improved equalizer member 19 whose ends are provided with the upstanding or vertically disposed yokes 20, 20 shown of channel formation, see Figure 2, with the inner faces of the yoke sides preferably provided with load pads at 21, which are disposed adjacent similar pads or bosses formed on the side walls of the roller bearing housing 22.

In order to prevent dissociation or dropping

down of the wheel journals in the event of mishap, the bottoms of the yokes 20 either may be provided with the conventional tie or bottom strap as heretofore employed with the frame pedestals and which may be bolted to the bottoms of the equalizer yokes 20, or the bottoms of the yokes may be closed by the extended ends of the equalizer beam as shown at 23 and which in turn tends to reinforce the lower ends of the yokes 20.

One leg or side of each yoke, namely the legs or sides disposed toward the same end of the truck, is provided with an enlargement and outwardly extending pin, preferably formed integral with the yoke as shown at 24 in Figure 2; the pin portion being preferably arranged substantially in the same horizontal plane as the lower apertured portions of the brackets 16 and 18 heretofore mentioned.

The brackets and pin portions provide means whereby the control arms 25, 25 are secured to the truck frame and to the equalizer and journal bearing housing receiving yoke units.

The arms 25 (which may be cast) are shown in the form of a built-up box-like construction shown in Figures 2 and 3 tapered toward one end where it terminates in a hub or ring portion 26 which is preferably provided with an oppositely tapered inner surface as shown in Figure 2. The hub or ring 26 is provided with cone-shaped rubber bushings 27 through which the pin 24 extends; the outer end of the pin 24 being threaded to receive the bevel faced washer 28 and nut 29. As shown in Figure 2, when the nut 29 is screwed up on the pin 24, the outer ends of the cone bushings, by reason of the beveled surfaces on the base of pin 24 and on the washer 28, are compressed or mushroomed over the ends of the hub 26 and thus provides a resilient, non-metallic relation not only between the pin and the hub of the arm but also between the end of the arm or its hub and the adjacent portions of the equalizer units.

In order to afford sufficient bearing contact with the brackets depending from the truck frame, the arms 25 are shown increasing in width and provided with the laterally disposed portions 30. The ends at the bases of the arms and the ends of the portions 30 are provided with pin or bolt receiving openings surrounded by the tapped bosses 31. The brackets 16 and 18 are of width to correspond with the laterally extended base portions of the arms or links 25 in order to provide a wide bearing therebetween which will prevent lateral movement or tilting of the arms. The laterally extending base portions of the arms 25 are shown bolted to the respective brackets 16 and 18 by bolts 32 which are provided with rubber sleeves or bushings 33 and the bolts intermediate the brackets and the arms are provided with rubber pads 34 whereby metal-to-

metal contact between the brackets and the arms is prevented and lateral vibrations or movements between the frame and equalizer units absorbed as well as relative longitudinal movement between the frame and units.

The exemplification is believed to be the best embodiment of the invention but certain structural modifications may be made without, however, departing from the spirit of our invention as defined in the appended claims.

What we claim is:

1. In a railroad car truck, a truck frame whose side members are provided adjacent one end and at an intermediate point with depending brackets apertured at their lower ends; equalizer beams disposed beneath the truck side members and provided at the ends with upwardly disposed journal bearing housing receiving yokes, each yoke on a side disposed toward the same end of the truck having an outwardly disposed horizontal pin portion; and connecting arms pivotally secured at one end on said pin portions while the other end of each arm is yieldingly secured to the adjacent bracket so as to resist lateral movement of the arms.

2. In a railroad car truck, a truck frame, each side member whereof is provided with a pair of depending brackets provided with a plurality of apertures at their lower ends; an equalizer and journal bearing holding unit provided with outwardly disposed pins; a connecting arm between each pin and the lower end of the adjacent bracket, one end of the arm being journaled on said pin while the other end of each arm has a lateral extension apertured to register with the apertures of the brackets; cushioning means between the arms and the brackets; and bolts disposed through the registering apertures of the brackets and the laterally extended ends of said arms whereby the latter are yieldingly secured in place.

3. In a railroad car truck, a truck frame provided with depending brackets at one end and at a point intermediate of the journals of the truck; an equalizer unit on each side of the truck, each unit at its ends being provided with vertically disposed journal bearing housing receiving portions formed to permit relative vertical movement between the housings and the unit, one side of each of said portions being provided with an outwardly disposed extension; a longitudinally disposed connecting arm between each of said extensions and the correlated brackets of the frame and provided with laterally extended ends; and vibration absorbing cushion elements at the ends of the arms.

4. In a railroad car truck, an equalizer unit on each side of the truck, each unit being provided at its ends with a vertically disposed journal bearing housing receiving yoke formed to prevent outward movement of the bearing housing while permitting relative vertical movement between the unit and the journal bearing housings, each yoke, on the side disposed toward the same end of the truck, being provided with a laterally disposed portion; a truck frame resiliently mounted on said units and provided at one end and at a point intermediate the journals with depending brackets; transversely enlarged links connected to said laterally disposed portions of the yokes and to said frame brackets; and resilient elements at the point of connection of the links adapted to compensate for relative longitudinal and lateral movements between the units and the truck frame.

5. In a railroad car truck, a truck frame whose side members are provided with depending longitudinally spaced brackets disposed laterally of the side members and apertured at their lower ends; equalizer beams disposed beneath the side members and provided at their ends with closed ended journal bearing housing receiving portions adapted to prevent lateral outward movement of the bearing housings; connecting arms pivotally connected at one of the ends to the equalizer beams through the medium of horizontally disposed pins while the other ends of the arms are laterally enlarged and apertured to match the apertured lower ends of the brackets to which they are secured; and cushion means arranged between the arms, said brackets and said pins.

6. In a railway truck, wheels and axles, journal boxes for said axles, equalizing members on opposite sides of the truck supported by said boxes and having end portions adapted to receive said boxes whereby each equalizing member and the corresponding boxes move as a unit in the truck, a truck frame member spring supported on said equalizing members and free of direct engagement with said equalizing members and free of association with the journal boxes except through said equalizing members, and a horizontally disposed anchor connected to and extending between an equalizing member on one side of the truck and said frame member, the connections between the anchor and the equalizing member and the frame member including resilient means to cushion forces transmitted between the equalizing member and the truck frame, said anchor at one end having a wide portion for connection to one of said members and a substantially narrow portion for connection to the other member whereby the equalizing member to which the anchor is connected is held against substantial movement relative to said frame member longitudinally and transversely of the truck while accommodating relative vertical movement between them.

7. In a railway truck, wheels and axles, journal boxes for said axles, equalizing members on opposite sides of the truck supported by said boxes and having end portions adapted to receive said boxes whereby each equalizing member and the corresponding boxes move as a unit in the truck, a truck frame member spring supported on said equalizing members and free of direct engagement with said equalizing members and free of association with the journal boxes except through said equalizing members, and a pair of longitudinally spaced anchors connected to and extending between said truck frame member and an equalizing member on one side of the truck with the connections between the anchors and the equalizing member and the frame member including resilient means to cushion forces transmitted horizontally between the equalizing member and the truck frame, said anchors at one of their ends having a wide portion for connection to one of said members and having substantially narrow portions at their other ends for connection to the other member whereby said equalizing member and truck frame member are held against substantial movement relative to each other longitudinally and transversely of the truck while accommodating relative vertical movement between them.

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