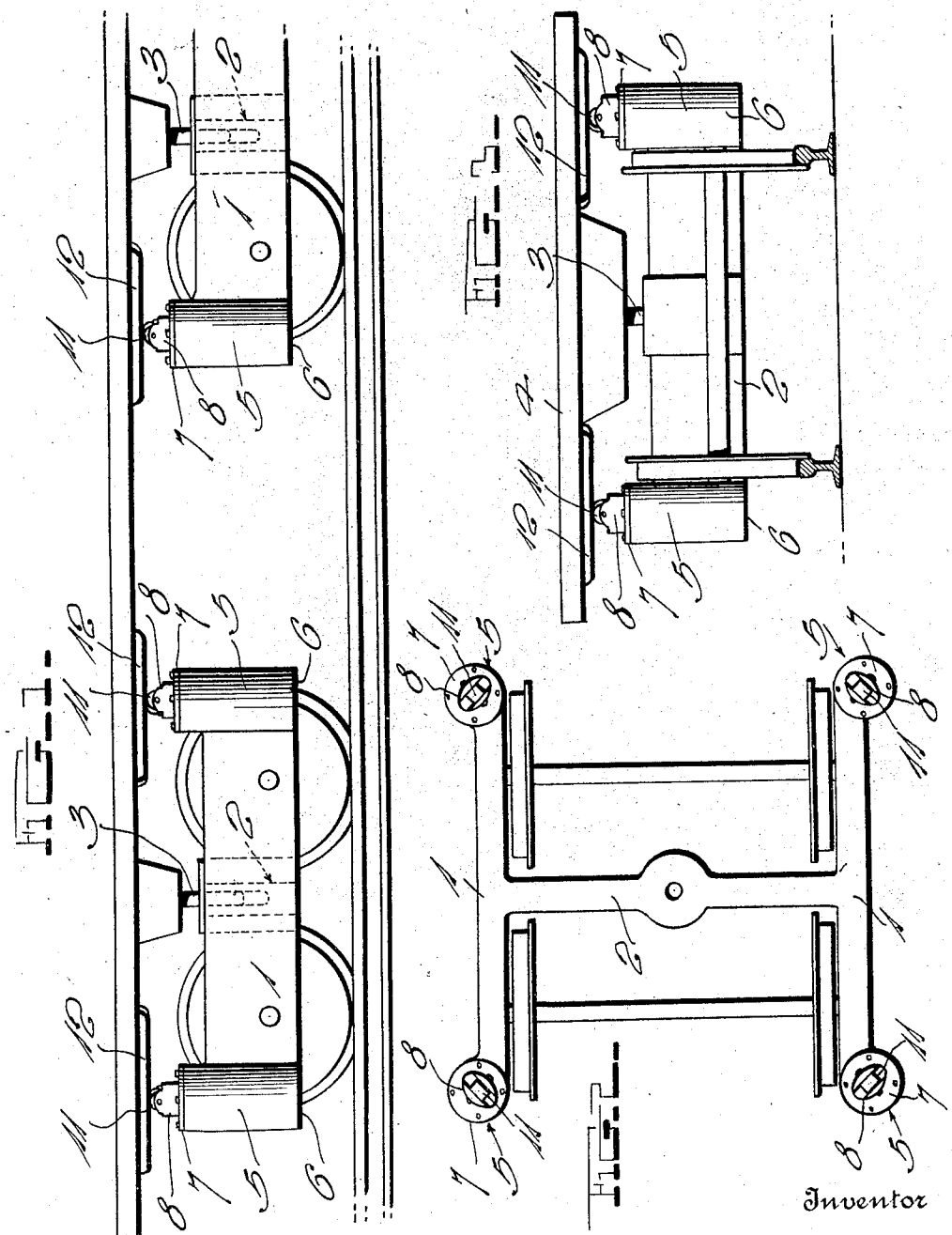
Aug. 28, 1923. 1,466,590

A. J. KELLEY

RAILWAY CAR TRUCK

Filed Sept. 7, 1922 2 Sheets-Sheet 1



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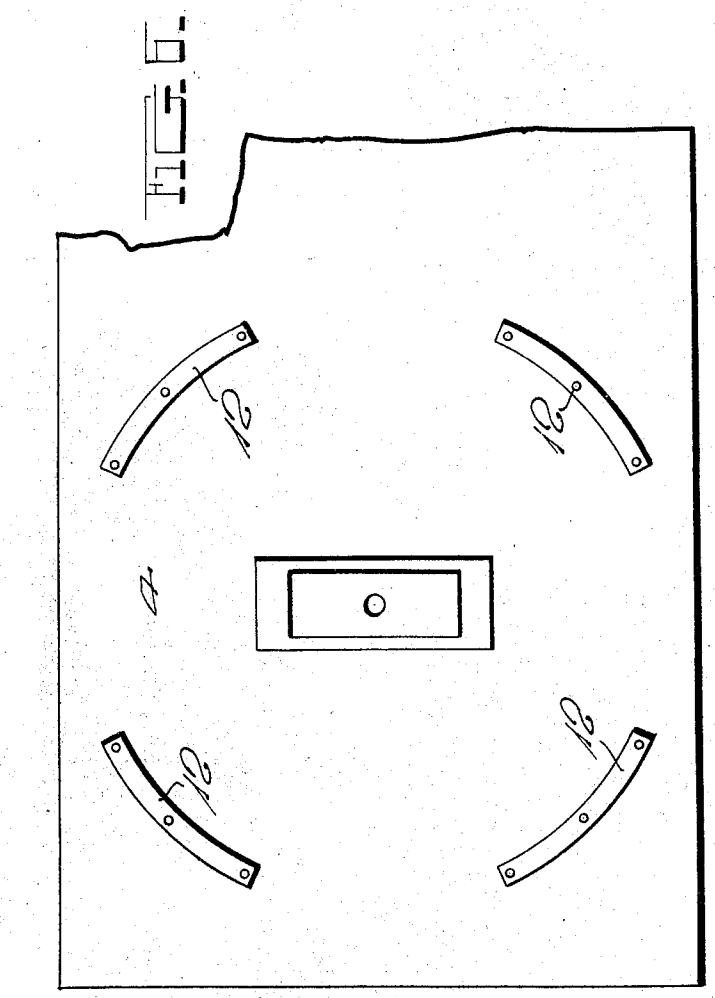
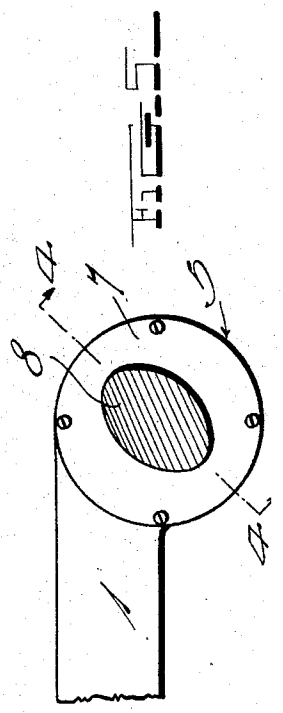


FIG. 5.



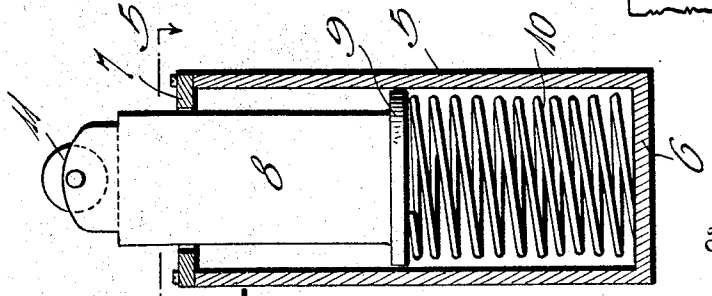


FIG. 4.

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UNITED STATES PATENT OFFICE.

ALBERT J. KELLEY, OF DORCHESTER, MASSACHUSETTS.

RAILWAY-CAR TRUCK.

Application filed September 7, 1922. Serial No. 586,715.

To all whom it may concern:

Be it known that I, ALBERT J. KELLEY, a citizen of the United States, residing at Dorchester, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Railway-Car Trucks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in railway car trucks, and has for its object to provide a truck of novel form in which the weight of the car body is supported at four distinct points around the king-pin or pivot of the truck, the object of this arrangement being to prevent undesirable vertical oscillation of the trucks which prevents wearing away the rail ends at the joints, eliminates depression of the roadbed at the rail joints, decreases wear on switches and crossovers, lessens the liability for the rails to become uneven, insures a better easier riding car, tends to strengthen the construction of the car and truck, is less expensive and more simple than present car trucks, and increases safety of the car by having a four-point support instead of one.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, the description being supplemented by the accompanying drawings.

Figure 1 is a side elevation of a portion of a car embodying my improved trucks.

Figure 2 is a top plan view of one of the trucks.

Figure 3 is an end elevation.

Figure 4 is an enlarged detail vertical section through one of the four yielding supports.

Figure 5 is a horizontal section on line 5—5 of Fig. 4.

Figure 6 is a bottom plan view of a portion of the car body.

In the construction shown, the improved truck includes a pair of suitably constructed side frames 1 connected by a bolster 2 adapted to be engaged by a king-pin 3, by means of which a pivotal connection is established between the truck and the car body 4. There is no weight supported immediately adjacent the pivot pin 3 but all weight is distributed at the four corners of the truck. In the preferred form of construction, the ends of the side frames 1 are provided with integral vertically disposed guide cylinders 5 which are provided with integral bottoms 6 and removable top plates 7. These plates have non-circular openings through which vertical plungers 8 pass non-rotatably, the lower ends 9 of said plungers however being of circular form to slide freely within the cylinders 5 against the action of coiled springs 10 located in said cylinders to yieldably support the plungers. The upper ends of the plungers 8 are provided with appropriate anti-friction rollers 11 upon which four tracks 12 carried by the car body 4, concentric with the pivot 3, are supported. This arrangement permits the car truck to turn freely in rounding curves, yet the body is at all times supported at four points which, although allowing all necessary vertical movement of the truck, prevents excessive movement and consequently has the advantages above enumerated. It will be understood that the plungers 8 are so held that their rollers 11 have their axes disposed radially with respect to the pivot 3, whereby they may freely roll upon the tracks 12, it being to maintain this relation, that the plungers pass non-rotatably through the cover plate 7.

Excellent results may be obtained from the details disclosed and they are therefore preferably followed, but within the scope of the invention as claimed, numerous minor changes may be made.

I claim:

1. A car truck comprising a wheeled frame adapted for connection with a car body by a central pivot, said frame having vertical guides at its four corners, coiled springs in said guides, and plungers in said guides resting on said springs, said plungers being adapted to engage tracks on the car body to yieldably support the latter at four points.

2. A car truck comprising a wheeled frame adapted for connection by a central

pivot to a car body, the four corners of said frame having integral vertical cylinders provided with bottom and top plates, the latter having non-circular openings, plungers having non-circular portions, passing through said non-circular openings, the upper ends of said plungers being adapted to engage tracks on a car body, and coiled springs in the cylinders supporting said plungers yieldably.

In testimony whereof I have hereunto affixed my signature.

ALBERT J. KELLEY.