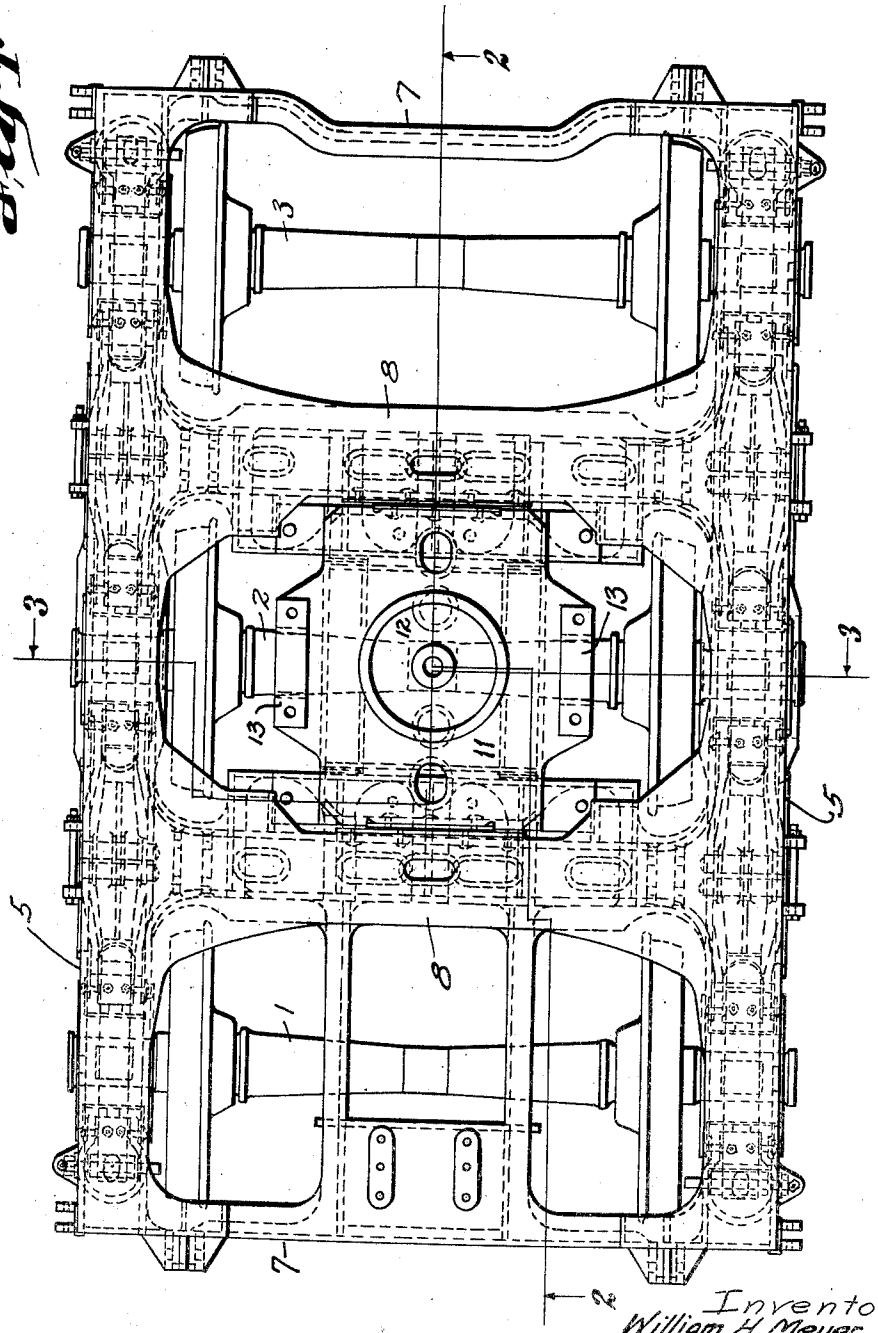
Oct. 25, 1932. W. H. MEYER ET AL 1,884,801

RAILWAY CAR TRUCK

Filed July 31, 1930 4 Sheets-Sheet 1

Fig. 1.



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RAILWAY CAR TRUCK

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Fig. 2.

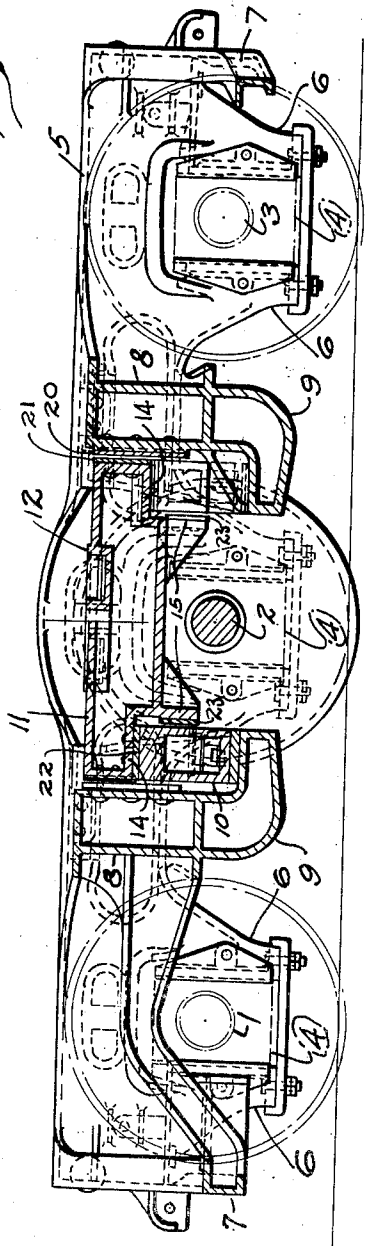
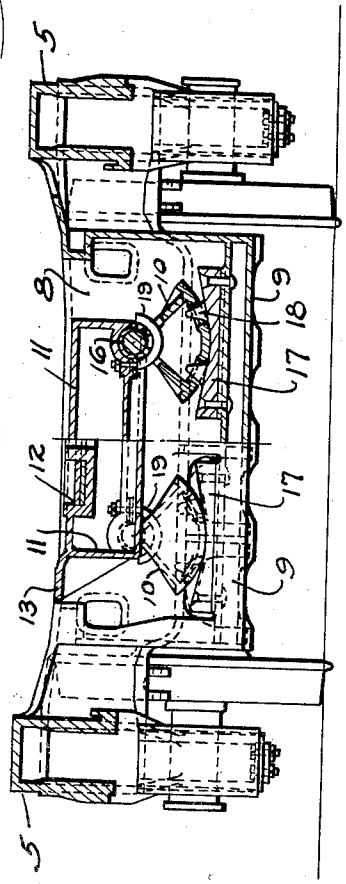


Fig. 3.



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RAILWAY CAR TRUCK

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Fig. 4.

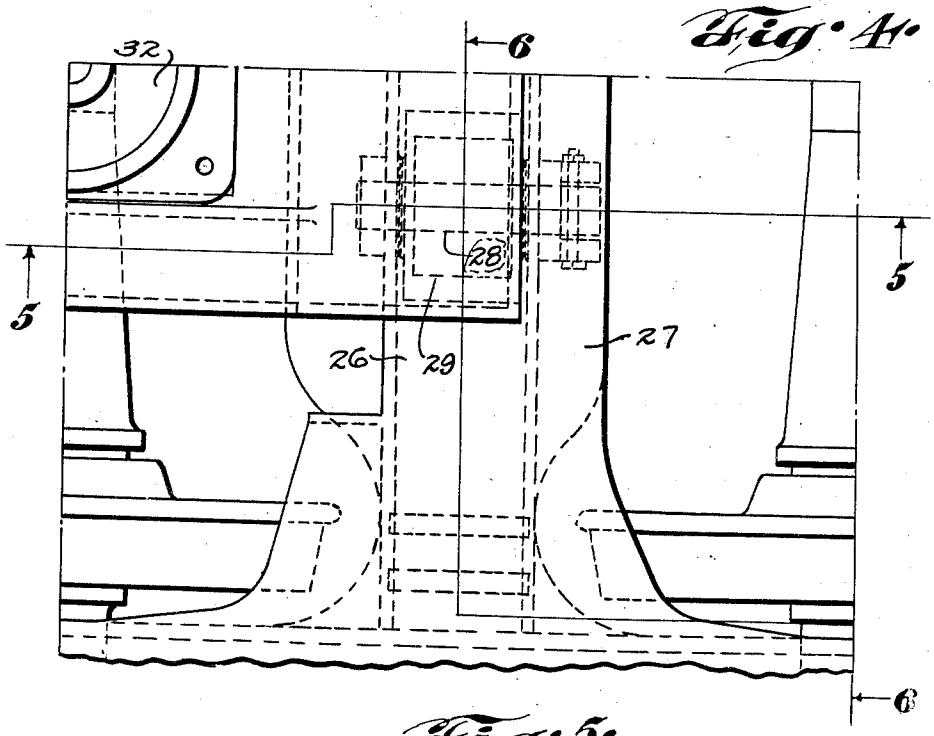
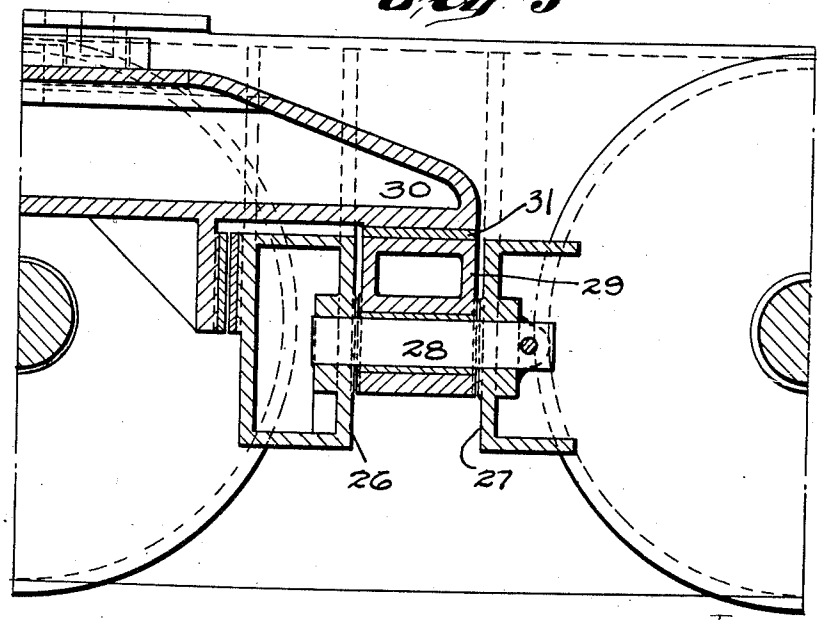


Fig. 5.



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RAILWAY CAR TRUCK

Filed July 31, 1930 4 Sheets-Sheet 4

Fig. 6.

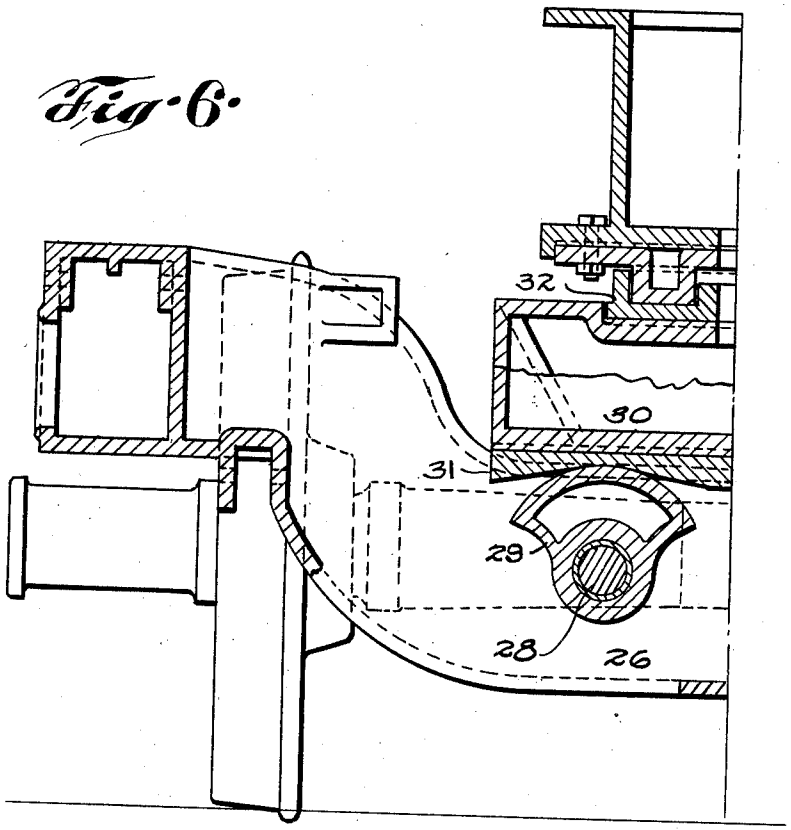


Fig. 7.

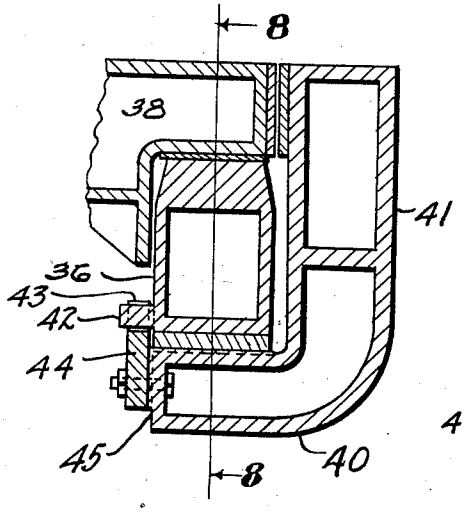
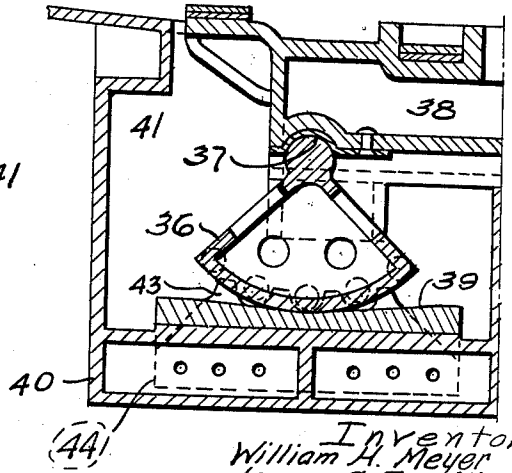


Fig. 8.



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UNITED STATES PATENT OFFICE

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RAILWAY CAR TRUCK

Application filed July 31, 1930. Serial No. 472,146.

Our invention relates to railway rolling stock and consists in all of the novel features illustrated in the accompanying drawings and described below, and more particularly to the features which provide a truck of the rocker bearing type as distinguished from a truck of the swing hanger type.

One of the objects of our invention is to simplify the rocker structure by providing a single pivot bearing between the rocker and one of the members associated therewith. This arrangement eliminates the movement of a rocker pivot from its seat as occurs in the usual double pivot rocker. This arrangement also provides for a longer bearing on the rocker face and avoids the pointed bearing of the usual double-cam face rocker.

Another object of our invention is to provide a rocker supported bolster structure which (compared with the usual swing like bolster suspension) provides a relatively great lateral movement of the bolster and a relatively slight vertical lift of the bolster as it moves from its normal position transversely of the vehicle, whereby accessive resistance to lateral movement of the bolster is avoided. The initial resistance can be made zero, as well as the constant resistance, which result cannot be effected with the usual double pivot rocker.

Another object of our invention is to provide a low center plate and at the same time retain the advantages of a rocker mounting for the bolster.

Another object of our invention is to prevent unintentional disassembly of the bolster and rockers if the bolster is lifted from the remainder of the truck structure.

Another object of our invention is to facilitate the maintenance of the truck structure by providing suitable wear plates and bearing plates which may be renewed when desired without renewing more substantial portions of the truck structure.

These general objects, and more specific objects as set forth below, are attained in the structure illustrated in the accompanying drawings in which—

Figure 1 is a top view of a six wheel truck embodying our invention.

Figure 2 is a longitudinal vertical section taken on the line 2—2 of Figure 1.

Figure 3 is a vertical transverse section taken on the line 3—3 of Figure 1.

Figure 4 is a partial top view of a truck embodying a modified structure.

Figure 5 is a vertical longitudinal section taken on the line 5—5 of Figure 4.

Figure 6 is a vertical transverse section taken on the line 6—6 of Figure 5.

Figures 7 and 8 are, respectively, longitudinal and transverse sections through another modification of our invention.

We have shown our invention in the preferred form as embodied in a six wheel truck which may be used under different types of railway vehicles and the three axles of the truck are indicated at 1, 2 and 3, respectively, and these axles mount the usual journal boxes 4. The truck frame includes wheel pieces 5 having pedestal jaws 6, end rails 7, and transverse transoms 8. Each transom comprises a body portion of box shaped cross section connecting the wheelpieces 5 and each transom has a downwardly and inwardly projecting hollow portion 9 forming a shelf for mounting the rockers 10.

The bolster includes a hollow main body portion 11 having a center plate 12 for receiving the body center plate (not shown) and also having projections 13 at its ends forming side bearings for supporting the body side bearings (not shown). Each side of the bolster has a recessed portion 14 adapted to rest upon the rockers 10 and depending from the body portion and adjacent to the recessed portion 14 we provide rocker guide members 15.

Each rocker 10 has engagement with the bolster in the form of a single pivotal bearing 16 and has engagement with the transom shelf 9 in the form of a concave rocker seat 17 which is provided with upstanding lugs 18 which project through suitable openings provided in the lower face of the rocker. These interengaging elements on the bearing and rocker prevent lateral displacement of these parts.

In order to provide sufficient clearance between the bolster and the brake rigging or

wheels during the lateral swinging of the bolster, the single pivotal bearing of the rocker preferably engages the bolster and the inclined bearing seat is mounted on the truck frame. These clearances and the lateral swing of the bolster would necessarily be decreased if the rocker engaging elements were reversed because the distance between the outer ends of the inclined seats 17 and the center line of the truck is greater than the corresponding distance over the pivot bearings.

A hook-like bolt 19 is secured to the bolster and extends downwardly and through suitable openings in the rocker and is curved about the pivot 16. This bolt constitutes means maintaining the assembly of the rocker and bolster if the bolster is lifted from the remainder of the truck structure.

The lower surface of the rocker 10 is concentric with the axis of the pivot bearing 16 and the upper surface of the rocker seat 17 is inclined in both directions from its center whereby lateral movement of the bolster will result in the bolster being lifted in a manner similar to that effected in rockers previously used in which two spaced pivotal bearings were provided on the rocker and the bolster.

Preferably, interengaging parts having relative movement are provided with suitable hardened steel wear plates, such as indicated at 20 on the inner side of the transom body; at 21 on the opposing face of the bolster body; at 22 on the rocker engaging recess in the bolster and at 23 on the rocker guiding face of the bolster member 15.

The above described structure attains the general objects previously referred to and we believe many of the features illustrated and described are novel as indicated in the appended claims. Some of these features are embodied in the modified structures, one of which, illustrated in Figures 4, 5 and 6, shows a transom structure having spaced walls 26 and 27 supporting a horizontal pivot pin 28 on which is mounted the rocker 29 which, in turn, supports the outer ends 30 of the bolster by means of a seat 31 having downwardly and outwardly inclined faces riding on the rocker. The bolster is provided with a center plate 32 but is shown without any side bearing elements as illustrated in the preferred structure.

This arrangement provides for the use of a wider transom and the space between the transom and the middle axle is unobstructed and may be utilized for a portion of the brake rigging, as indicated at 32 or, if desired, the inner portion of the transom may be moved nearer to the middle axle.

The modification illustrated in Figures 7 and 8 more closely approaches the preferred structure in that the rocker 36 has a single pivotal bearing 37 on a renewable plate on the bolster 38 and has an inclined seat member 39 carried on the shelf 40 depending from the transom 41. In this structure, however, the upper surface of the seat member 39 and the lower surface of the rocker 36 are flat and engage each other throughout their width, and the elements preventing lateral displacement are formed by lugs 42 on the side of the rocker and interengage teeth 43 formed on a plate 44 secured to the edge 45 of the transom shelf 40.

Preferably, all of the structures described include a truck frame comprising a one piece casting and a truck bolster formed of a one piece casting, and these castings are provided with suitable pads for machining where accuracy is required.

Obviously, other than cast structures could be employed and various other modifications than those referred to herein may be made without departing from the spirit of our invention and we contemplate the exclusive use of such variations as come within the scope of our claims.

We claim:

1. In a railway truck, a transverse member, a rocker mounted thereon, a bolster having a pivotal bearing on said rocker, said bearing comprising a renewable plate.

2. In a six wheel railway truck, three axles, a frame including wheel pieces extending over all of said axles, transoms intermediate said axles, opposed bearings on the lower portions of said transoms, rockers mounted on said bearings, and a bolster intermediate said transoms and carried on said rockers and provided with center plate and side bearing elements located below the level of the tops of said wheel pieces.

3. In a railway truck of the class described, a frame, a bolster, a rocker having a pivotal connection to said bolster and supporting said bolster on said frame, and a hook depending from said bolster and extending through an opening in said rocker and about said pivotal connection to prevent its separation from said bolster, if said bolster is lifted from said frame, without interfering with its rocking movement.

4. In a railway truck of the class described, a frame, a bolster, a rocker supporting said bolster on said frame, there being a single pivotal bearing between said bolster and rocker, and a hook depending from said bolster and curved about said bearing as a center and extending through an opening in said rocker to prevent separation of said rocker and bolster if said bolster is lifted from said frame.

5. A truck frame transom having a main body portion of hollow cross section and including a downwardly and laterally projecting shelf of hollow cross section provided with a rocker seat below the level of said main body portion.

6. In a railway car truck, spaced wheel

pieces, spaced transverse elements connecting said wheel pieces, a bearing pin extending transversely of said elements and seated therein, a rocker riding on said pin between said elements and extending upwardly from said pin, and a bolster supported by said rocker.

7. In a railway truck, a transverse member, a pin seated in said member and projecting from one side thereof, a rocker pivotally mounted on said pin, a bolster supported by said rocker above said pin and extending over said transverse member and having a depending arm on the side of said transverse member opposite to said pin for guiding said bolster in movement along said transverse member.

8. In a truck of the class described, a frame, a bolster, a rocker having a pivotal connection to said bolster and supporting said bolster on said frame, and a hook depending from said bolster and extending through an opening in said rocker and curved about said pivotal connection in a plane parallel to the plane of rocking movement of said rocker to prevent separation of said rocker from said bolster, if said bolster is lifted from said frame, without interfering with its rocking movement.

In testimony whereof we hereunto affix our signatures this 28th day of July, 1930.

WM. H. MEYER.
JAS. C. TRAVILLA, JR.
EDWIN C. JACKSON.