(No Model.)

R. BEESON.

CAR TRUCK.

No. 590,563. Patented Sept. 28, 1897.

FIG. 1.

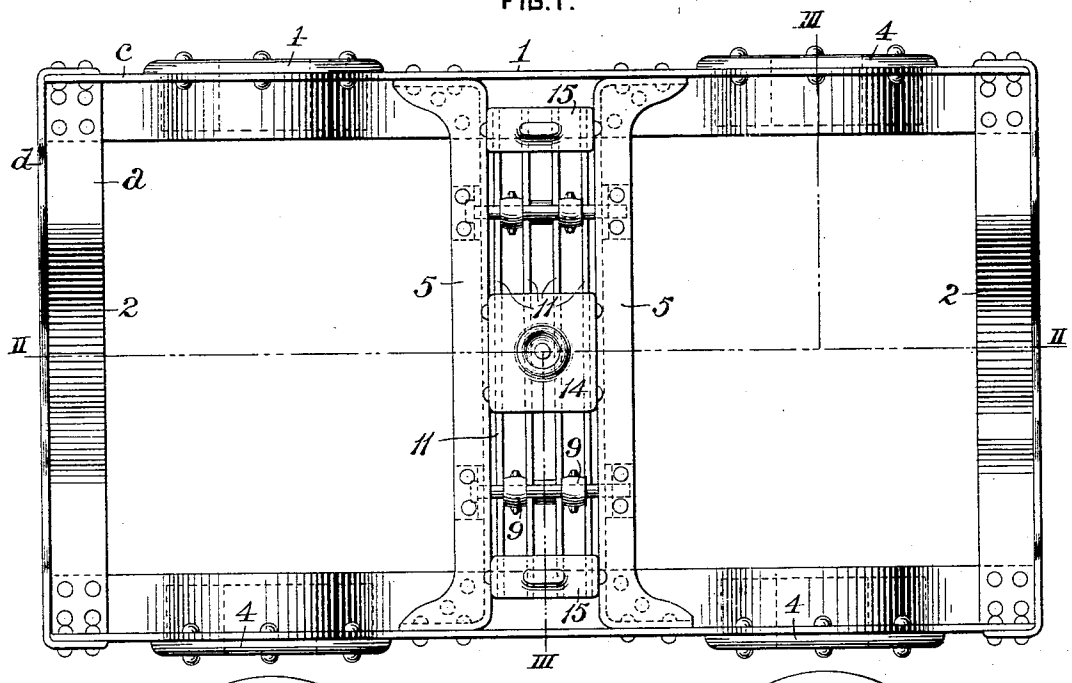


FIG. 2.

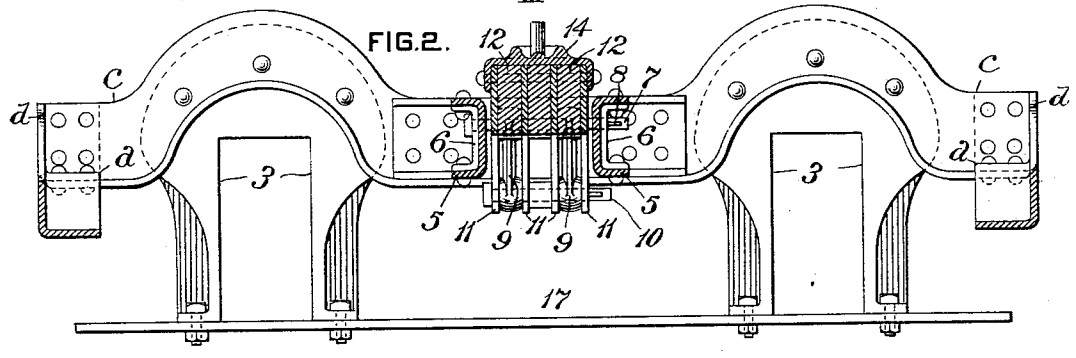
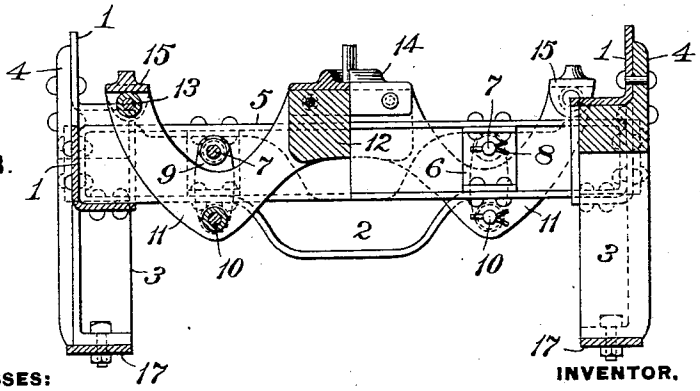


FIG. 3.



WITNESSES:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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RICHARD BEESON, OF NEW GALILEE, PENNSYLVANIA.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 590,563, dated September 28, 1897.

Application filed February 13, 1897. Serial No. 623,212. (No model.)

To all whom it may concern:

Be it known that I, RICHARD BEESON, a citizen of the United States, residing at New Galilee, in the county of Beaver and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Car-Trucks, of which improvements the following is a specification.

The invention described herein relates to certain improvements in the construction of car-trucks for railway-cars, and has for its object such an arrangement or combination of structural shapes as will afford a strong and rigid frame and which will also be capable of easy reshaping and bending when distorted in accidents or in any other way.

It is a further object of the invention to provide a swinging bolster for supporting the car-body, whereby the body and truck of the car can move independently of each other in passing around curves.

In general terms the invention consists in the construction and combination, substantially as hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a top plan view of a car-truck frame embodying my invention. Fig. 2 is a vertical section longitudinal of the truck, the plane of section being indicated by the lines II II, Fig. 1. Fig. 3 is a transverse section, the plane of section being indicated by the line III III, Fig. 1.

In the practice of my invention the sides 1 and ends 2 of the truck-frame are formed by angle-bars, which are connected at their ends by overlapping joints—that is to say, the horizontal portions *a* of the end pieces are cut away so as to fit within the vertical walls *c* of the sides 1, and the ends of the vertical walls *d* of the end pieces 2 are bent around against the vertical walls of the sides 1 and riveted thereto, as clearly shown in Fig. 1. At suitable points along their length the sides 1 are upwardly curved or bent, so as to form seats or pockets for the correspondingly-shaped upper ends of the pedestals 3, which are provided with flanges 4, adapted to overlap the vertical walls *c* of the sides 1 and be riveted thereto, thereby securing the pedestals in position in their seats. In order to prevent any interference by the end pieces 2 with the draft-rigging, said end pieces are downwardly curved at their middle portions, so as to permit of the interposition of the draft-rigging between said end pieces and the bottom of the car-body. While it is preferred to form both end pieces alike, it will be readily understood that only that end piece which is adjacent to the end of the car need be so bent or curved.

The truck-frame is transversely braced or strengthened by channel-bars 5, which have their ends so bent or shaped as to permit of their being securely riveted to the vertical walls *c* of the sides 1. In addition to strengthening and bracing the frame in the manner described these transverse beams serve as supports for the swinging bolster, and to that end the beams are strengthened at suitable points by plates 6, riveted to the beams, and through these reinforcing-plates and the transverse beams are passed bolts 7, which are preferably held from longitudinal displacement by cotter-pins 8. On these bolts 7 are loosely mounted links 9, and through the lower ends of these links are passed bolts 10, which also pass through the bolster and are held from longitudinal displacement by cotter-pins or other suitable means. This swinging bolster consists of a series of plates 11, arranged parallel to each other, and blocks 12, interposed between adjacent plates, the blocks and plates being secured together by a series of transverse rivets, as clearly shown in Fig. 2. At their ends the plates are preferably spaced by means of collars or sleeves 13, arranged between the plates and surrounding the rivet-pin, whereby they are held together. The center plate 14 and side bearing-plates 15 are formed with side flanges or ears adapted to overlap the sides of the bolsters, as clearly shown, a sufficient distance to permit of their being secured in place by means of the rivets employed in holding the parts of the beam together. As clearly shown in Fig. 3, the portions of the bolster between the ends and middle portions are curved downwardly, so as to permit of the use of sufficient length of supporting-link to permit of the desired swing of the bolster.

The lower ends of the pedestals are connected together and braced by means of the

tie-rod, which can be riveted or bolted to the lower ends of the pedestals, as clearly shown in Figs. 2 and 3. These pedestals are preferably made of cast-steel or malleable iron, and in case of their being broken in an accident they can be removed by cutting the rivets, whereby they are secured to the sides 1.

One of the greatest objections to the manufacture of truck-frames out of metal is the difficulty of restoring them to shape when bent or twisted in an accident. This difficulty in restoring the frame is greatly enhanced in those forms of frame wherein the pedestals are formed integral therewith. By my improvements the parts of the truck-frame—*i. e.*, the pedestals—which are most liable to injury in an accident can be readily detached, as hereinbefore stated, and new ones substituted. It is also characteristic of my improvements that the shape of the pieces of metal forming the sides and ends of the truck is such as will lend itself readily to reshaping or restoration in case of accident. It will be observed that the bolster is made of such a length that its ends will overlap the horizontal portions of the angle bars or plates forming the sides of the truck-frame. It follows from this construction that in case of the breakage of the links supporting the bolster the latter will be prevented from dropping on the track and derailing the car.

I claim herein as my invention—

1. A truck-frame having in combination sides and ends formed of angle bars or plates overlapping each other at the corners of the frame, beams arranged transverse of the frame intermediate of the ends, and pedestals detachably connected by rivets or bolts to the sides, substantially as set forth.

2. A truck-frame having in combination sides and ends formed of angle bars or plates overlapping each other at the corners of the frame, the sides being provided with concave seats, and pedestals having their upper ends convex to fit said seats, and provided with flanges overlapping the side bars and detachably connected thereto by rivets or bolts, substantially as set forth.

3. A truck-frame having in combination sides and ends formed of angle bars or plates overlapping each other at the corners of the frame, one of the end bars being downwardly bent or depressed along its middle portion, substantially as set forth.

4. A bolster for car-trucks, consisting of a series of three or more plates suitably spaced by interposed blocks arranged at intervals and secured together, in combination with a center bearing secured to the edges of the plates, substantially as set forth.

5. A bolster for car-trucks consisting of a series of plates suitably spaced and secured together, the portions of the bolster intermediate of the ends and middle portion being depressed or U-shaped, in combination with links having their ends connected, respectively, to the truck-frame and to the bolster, substantially as set forth.

In testimony whereof I have hereunto set my hand.

RICHARD BEESON.

Witnesses:

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