(No Model.)

J. LINDEN.

CAR TRUCK.

No. 589,002. Patented Aug. 31, 1897.

Fig. 1.

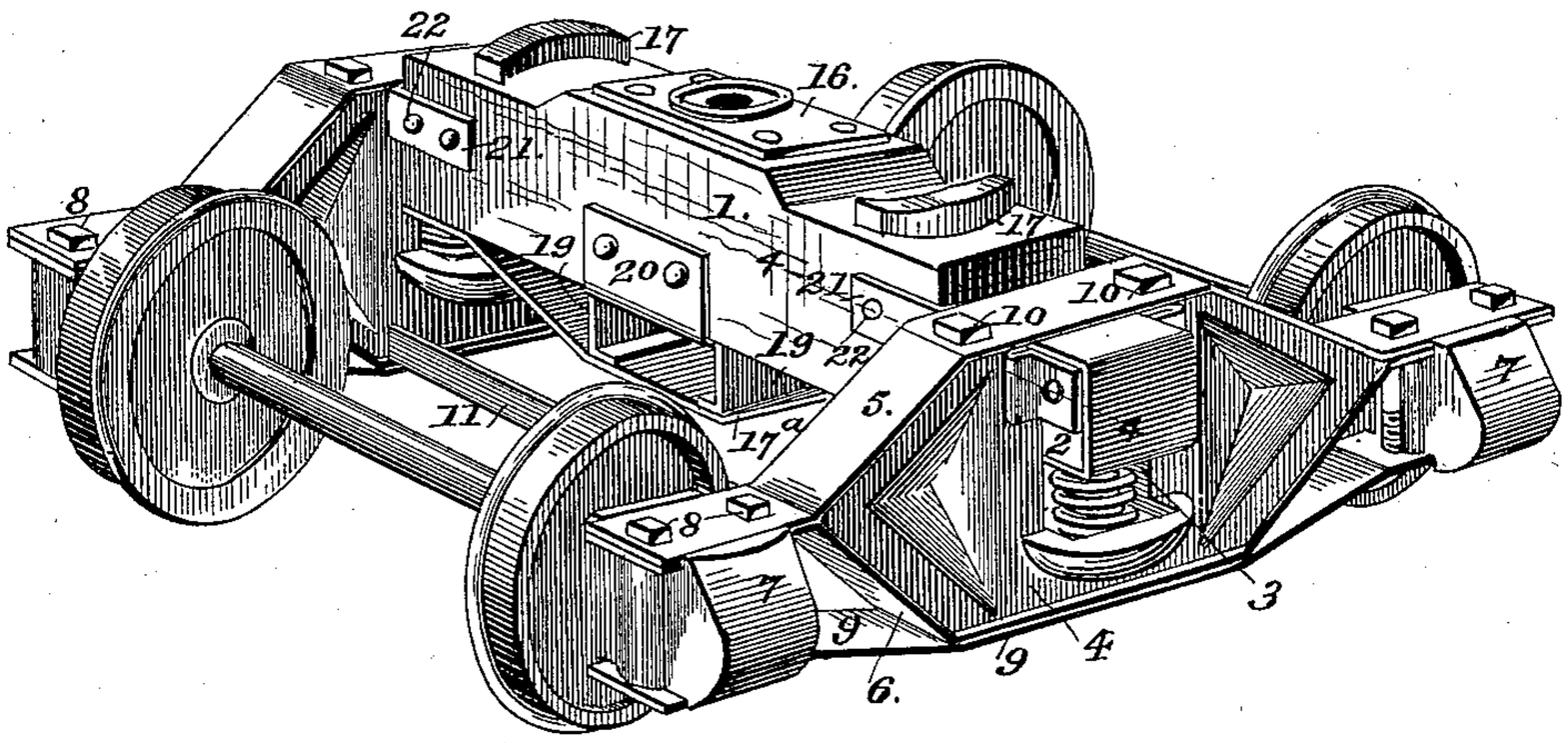


Fig. 5.

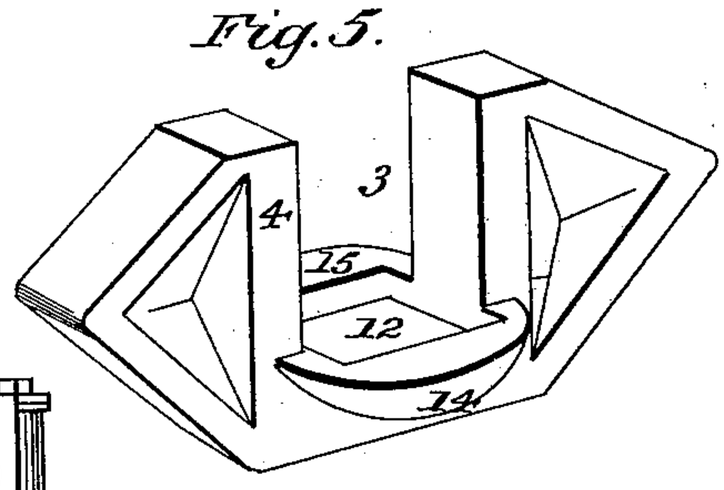


Fig. 3.

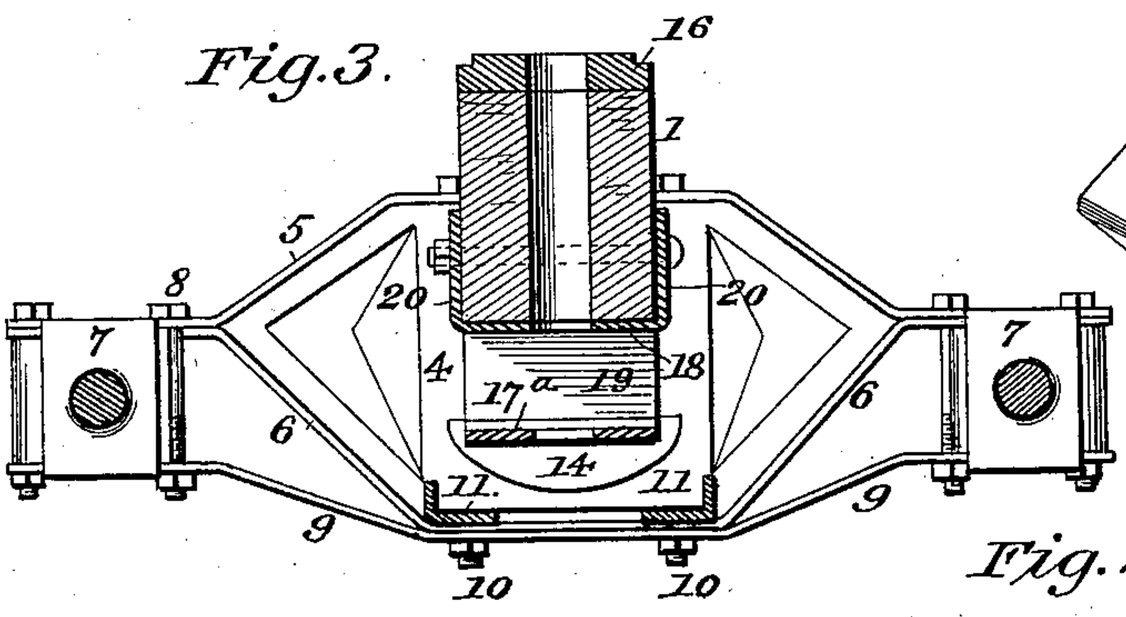


Fig. 4.

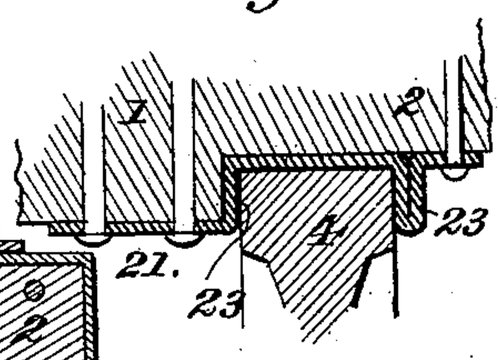
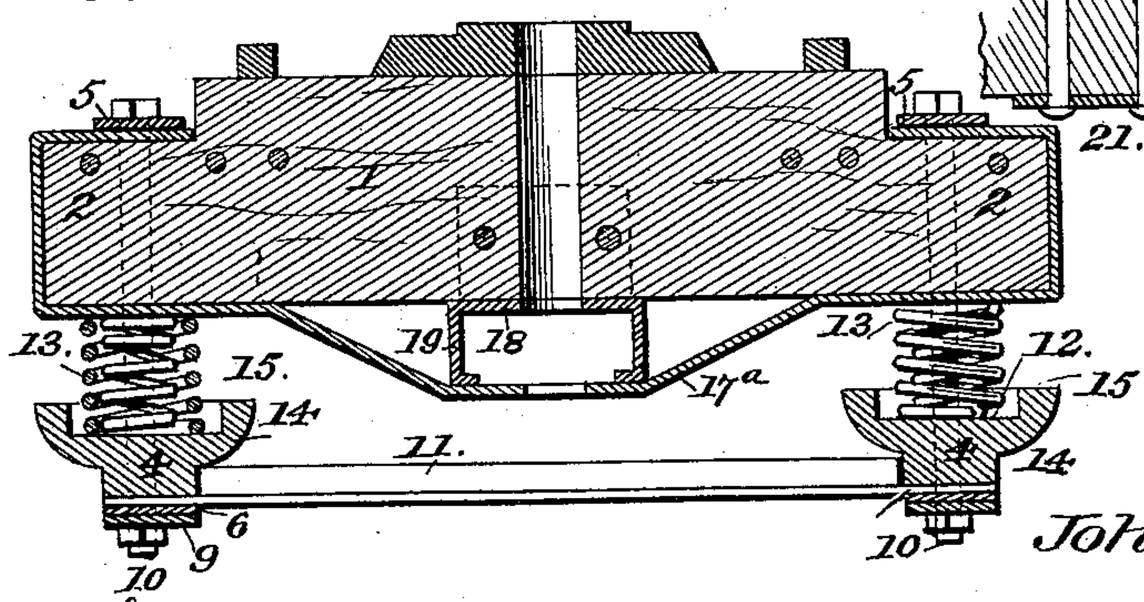


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN LINDEN, OF CHICAGO, ILLINOIS.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 589,002, dated August 31, 1897.

Application filed June 30, 1897. Serial No. 642,934. (No model.)

To all whom it may concern:

Be it known that I, JOHN LINDEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Car-Truck, of which the following is a specification.

This invention relates to improvements in car-trucks.

The object of the present invention is to improve the construction of car-trucks and to provide a simple, strong, and durable one designed for use on freight-cars and adapted, should a car become derailed, to permit the wheels to be readily replaced without liability of straining or otherwise injuring any of its parts.

Another object of the invention is to provide a car-truck which will dispense with many of the parts employed on the ordinary car-trucks and which will afford ready access to the journal bearings or brasses.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a car-truck constructed in accordance with this invention. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a longitudinal sectional view. Fig. 4 is a detail sectional view on line 4 4 of Fig. 1. Fig. 5 is a detail perspective view of one of the guide plates or columns.

Like numerals of reference designate corresponding parts in the several figures of the drawings.

1 designates a truck-bolster constructed of wood and having its ends 2 reduced and arranged in vertical guide openings or ways 3, of substantially diamond-shaped guide plates or columns 4, which consist of tapering end portions and rectangular central portions to conform to the configuration of and fill the space between the arch-bars 5 and the inverted arch-bars 6. The guide plates or columns are constructed of suitable cast metal, and by filling the space between the arch-bar and the inverted arch-bar greatly increase the strength and durability of the truck. The inner and outer faces of the tapering end portions of the guide plates or columns may be recessed, as shown in the accompanying drawings, to increase the lightness of the truck.

The ends of the arch-bars are secured at their terminals at the tops of journal-boxes 7 by means of vertical bolts 8 or other suitable fastening devices, and the journal-boxes may be mounted in pedestals or in any other suitable manner, and they are connected by a bottom pedestal tie-bar in the usual manner. The pedestal tie-bar and the arch-bars are secured to the guide plates or columns by vertical bolts or fastening devices 10, located at opposite sides of the guide openings or ways for the bolster and passing through registering perforations of the said guide plates or columns, the upper and lower arch-bars, and the pedestal tie-bar 9.

The sides of the truck are connected at their lower edges by horizontal angle-bars 11, arranged parallel with each other at opposite sides of the center-pin opening of the bolster and having their terminals interposed between the lower edges of the guide plates or columns and the inverted arch-bars and perforated for the reception of the vertical rods or bolts 10, which secure the angle-bars to the sides of the truck.

The guide plates or columns are provided at the bottoms of the openings 3 with seats 12 for springs 13, which support the bolster and which are located at the ends thereof. The springs 13 may be of any desired number and construction, and the seats for them are formed by laterally-projecting flanges or ledges 14, which are recessed to form a vertically-projecting ridge 15.

The bolster 1, which is provided with a center plate 16 and side bearings 17, is supported at its bottom by a truss, comprising a truss-bar 17^a and a central strut-plate 18. The truss-bar 17^a, which is of the same width as the body portion of the bolster, has its central portion bowed and is secured at its ends to the ends of the bolster. The strut-plate, which is arranged on the lower face of the bolster, is provided with depending flanges 19, which are interposed between the bolster and the truss-bar, as clearly shown in Fig. 2 of the accompanying drawings. The flanges 19, which depend from the bolster, are disposed longitudinally of the truck, and the

plate 18 is provided with upwardly-extending side flanges 20, which are secured to the side faces of the bolster. The truss-bar and the strut-plate are perforated and have such openings arranged in alinement with the center-pin opening of the bolster.

The ends of the truss-bar, which are directly engaged by the upper terminals of the springs 13, are extended vertically on the ends of the bolster and inward on the upper faces thereof. The bolster is provided with plates 21, arranged in pairs at each end of it and disposed horizontally on the side faces thereof, being secured to the same by horizontal fastening devices 22, which pass entirely through the bolster. The plates 21 are provided with vertical flanges 23, arranged in pairs and disposed at the inner and outer faces of the guide plates or columns and preventing any longitudinal movement of the bolster.

The side bearings of the bolster are slightly sloping and are arranged slightly below the plane of the center plate to facilitate a free movement of the truck.

The invention has the following advantages: The truck, which is designed for freight-cars, is exceedingly simple and inexpensive in construction, and at the same time possesses great strength and durability. It may be readily repaired at any shop, and it will afford free access to the journal bearings or brasses. It dispenses with many of the parts employed on trucks of the ordinary construction, and in event of a car becoming derailed the wheels may be readily replaced without liability of straining or otherwise injuring any of the parts of the truck.

What I claim is—

1. In a car-truck, the combination with a bolster, of an arch-bar, an inverted arch-bar, a tapering guide plate or column arranged between and filling the space inclosed by the arch-bars and conforming to the configuration thereof, said guide plate or column being provided with suitable ways for the bolster, and a spring for cushioning the bolster, substantially as described.

2. In a car-truck, the combination with an arch-bar, an inverted arch-bar, journal-boxes arranged at the terminals of said bars, a pedestal tie-bar connecting the journal-boxes, an oppositely-tapering guide plate or column filling the space between the arch-bar and the inverted arch-bar and conforming to the configuration thereof, said guide plate or column being provided with a vertical way, a bolster arranged within the way, and a spring for cushioning the bolster, substantially as described.

3. In a car-truck, the combination of the arch-bars, the inverted arch-bars, the pedestal tie-bars, journal-boxes arranged at the ends of such bars, the oppositely-tapered guide plates or columns arranged within the spaces between the arch-bars and the inverted arch-bars and filling the same, said guide plates or columns being provided with vertical openings, a bolster having its ends arranged in said openings, springs interposed between the bottoms of the openings and the bolster, the horizontal angle-bars connecting the guide plates or columns, and fastening devices passing through the guide plates or columns and all of said bars, substantially as described.

4. In a car-truck, the combination of the guide plates or columns provided with ways, a bolster mounted in said ways, and a truss supporting the bolster and comprising the truss-plate secured at its ends to the bolster, and the strut-plate secured to the lower face of the bolster at the center thereof and provided with depending longitudinal flanges interposed between the bolster and the truss-bar, substantially as described.

5. In a car-truck, the combination of guide plates or columns provided with ways, a bolster mounted in the ways, a truss comprising a longitudinal truss-bar secured at its ends to the bolster and extending upward on the ends and horizontally on the top of the same, and a strut-plate interposed between the bolster and the truss-bar, the side plates 21 arranged in pairs at the ends of the bolster and provided with vertical flanges located at the inner and outer faces of the guide plates or columns, and fastening devices securing the side plates to the bolster, substantially as described.

6. In a car-truck, the combination of an arch-bar, an inverted arch-bar, the oppositely-tapered guide plate or column provided with a vertical opening and having a seat at the bottom thereof formed by laterally-extending ledges or flanges forming ridges at their upper faces, a bolster, and a spring interposed between the bolster and said seat, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN LINDEN.

Witnesses:
FRANK HELANDER,
GUST. HORLIN.