

N. E. HIRSCH.
TRUCK.

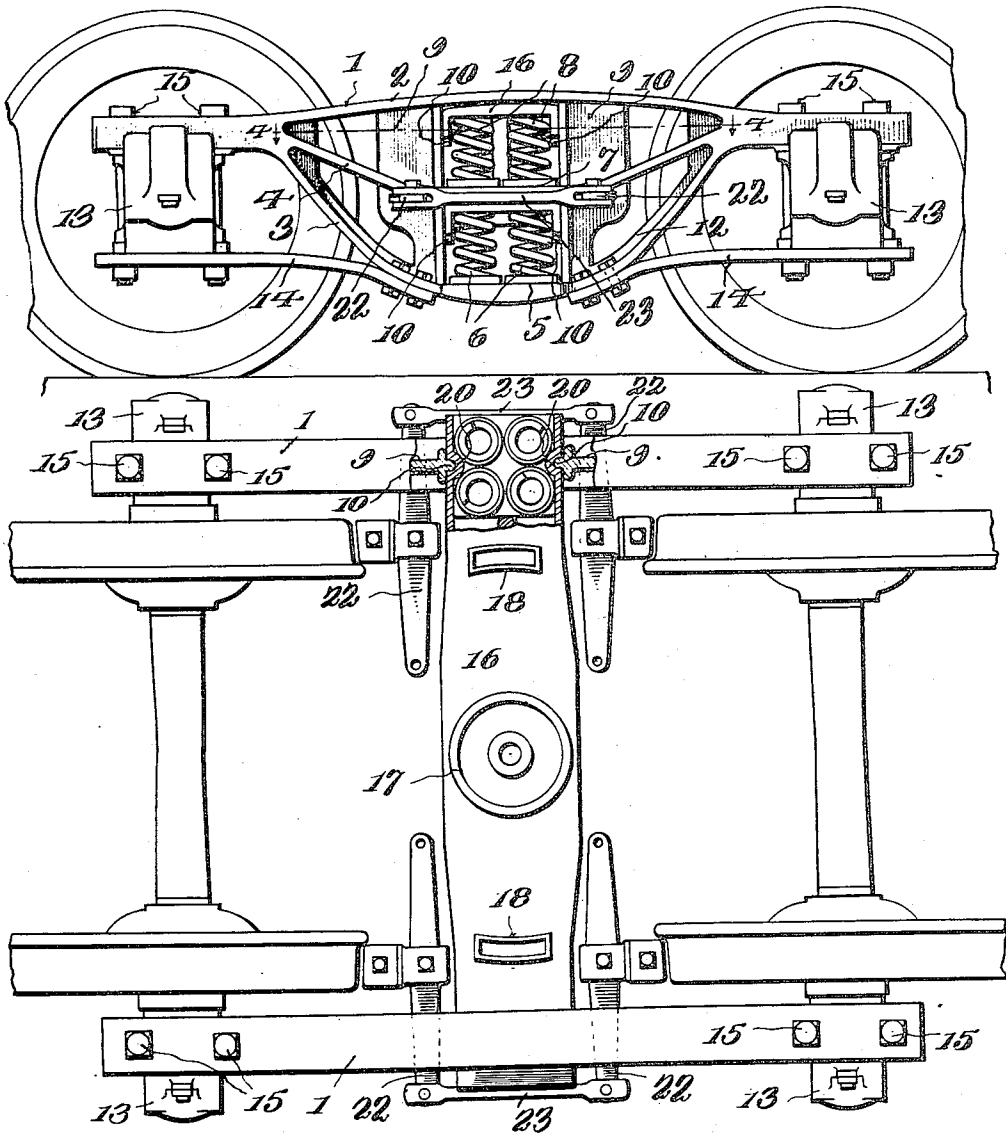
APPLICATION FILED AUG. 24, 1912.

1,065,526.

Patented June 24, 1913.

2 SHEETS—SHEET 1.

Fig. 1.



Inventor

Fig. 2.

Witnesses
James F. Fitz Gibbon.
Frank G. Burton

Nicholas E. Hirsch
By Helge M. Murray
his Attorney

N. E. HIRSCH.

TRUCK.

APPLICATION FILED AUG. 24, 1912.

1,065,526.

Patented June 24, 1913.

2 SHEETS—SHEET 2.

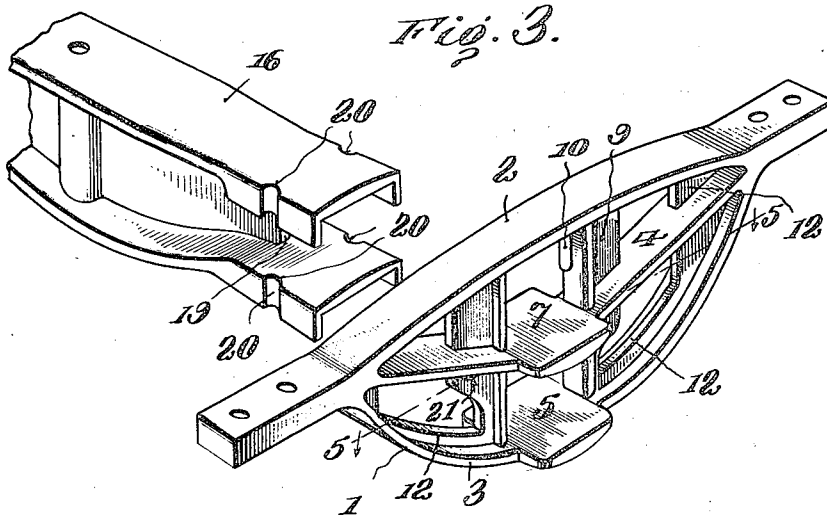


Fig. 4.

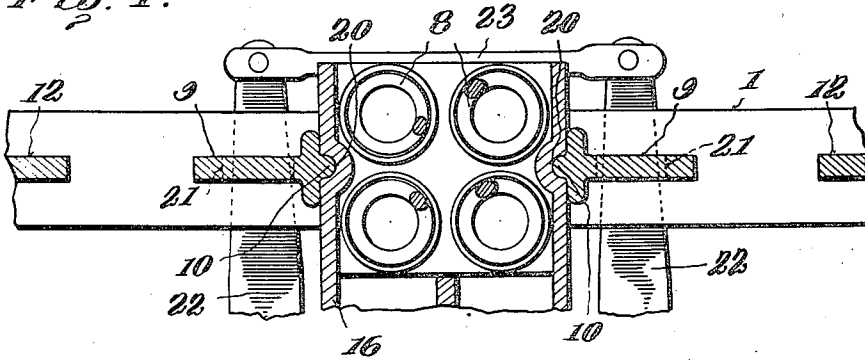
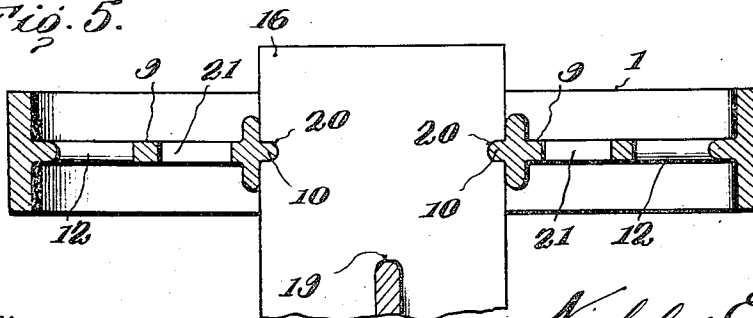


Fig. 5.



Inventor

Witnesses
James F. FitzGibbon
Frank S. Burton

Nicholas E. Hirsch
By Helge Ott Munnay
his Attorney

UNITED STATES PATENT OFFICE.

NICHOLAS E. HIRSCH, OF WILMINGTON, DELAWARE.

TRUCK.

1,065,526.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed August 24, 1912. Serial No. 716,896.

To all whom it may concern:

Be it known that I, NICHOLAS E. HIRSCH, a citizen of the United States, residing at Wilmington, in the county of Newcastle and State of Delaware, have invented certain new and useful Improvements in Trucks, of which the following is a specification.

This invention relates to trucks for railway cars, and has for its principal object the provision of means for sustaining and equally apportioning the weight of the car and its contents when subjected to its full capacity.

In loading a car to its full capacity, it often happens that a low coupling is the result; in which event the relative safety of such coupling is greatly reduced.

It is the object of this invention to overcome this danger, in the providing of especially designed side frames, connecting bolster and equally disposed sustaining springs, as will more fully appear hereinafter.

Another object of my invention is to provide a bolster and side frames which can be readily assembled without the use of many bolts, rivets and the like.

A further object of this invention is the provision of side frames which will permit the brake levers to operate upon the outside of the truck, so that when trouble does occur it can be readily repaired, without going under the car.

With these and other objects in view, the invention consists in the novel arrangement and combination of parts hereinafter described and pointed out in the appended claims.

In the drawings—Figure 1 is a side elevation of my improved truck; Fig. 2 is a plan view thereof partly broken away; Fig. 3 is a detached perspective view of the side frame and one end of the bolster which interlocks therewith; Fig. 4 is a detail horizontal sectional view through the side frame, on the line 4—4 of Fig. 1 with the bolster in place; and Fig. 5 is a similar view on the line 5—5, of Fig. 3, with the bolster in position therein.

Referring to the drawings, the truck consists of a pair of side frames, the bolster, the usual journal boxes, tie-bars, and the

like. Each side frame is cast and includes the top and lower arch bars and column ports, and an intermediate arch bar, the latter being interposed for greater spring sustaining strength, as will more fully hereinafter appear.

The side frames 1 are identical in structure, and are composed of an upper arch bar 2, a lower arch bar 3 and an intermediate arch bar 4. The lower arch bar 3 is provided with a supporting surface or platform 5 at the center thereof, and receives a plurality of springs 6; and the intermediate arch bar 4 is similarly intersected by a supporting surface or platform 7 and receives a plurality of springs 8. These supporting surfaces 5 and 7 are larger in area than the arch bar sections, in order that they may support a set of four standard springs each. Extending from the lower arch bar to the upper arch bar, and intersecting the intermediate arch bar are the columns or posts 9 at either side of the platform surfaces. These columns are of web sections and provide substantial strengthening mediums for the three arch bars. Upon the inner side of each column, beneath the upper and intermediate arch bars are vertically arranged lugs or tongues 10 the purposes of which are to fit within corresponding recesses or grooves formed upon the bolster, to be described presently. The side frames are further formed with the strengthening web sections 12 which are formed along the upper side of the lower arch bar, and extend vertically and intersect the intermediate and upper arch bars. The ends of the side frames are of substantial metal and are secured to the upper side of the journal boxes 13.

Suitable tie bars 14 are secured to the under side of the lower arch bar and the under side of the journal boxes. The journal boxes act as struts between the ends of the side frames and the tie-bars, near their outer ends, and all of these parts are united by journal box bolts 15 passing through the several members and provided with nuts on their lower ends. The tie-bars may, however, continuously extend under the lower arch bar, if desired.

Connecting the side frames 1, is the bolster 16, provided with the usual center plate 17 and near each end the truck side bearings 18, all of these parts being cast integral with the bolster.

The bolster is of the I-beam type, its lower surface being slightly arched. At each end, the web section is cut away as at 19, and both of its upper and lower surfaces are extended parallel and formed in the shape of channel beams. Recesses or grooves 20 are provided in these latter channel beam-sections and receive the lugs or tongues 10 formed on the columns of the side frames.

In interlocking the side frames upon the bolster ends, they are first slid onto the same, until the lugs register with the corresponding recesses formed in the ends of the bolster, when the side frame is allowed to drop securely into place, as shown in Fig. 1. The springs are now interposed in their respective pockets, there being eight arranged upon each side of the truck within the supporting surfaces of each side frame. From the present arrangement of bolster and side frames with their spring supporting or platform surfaces, the usual spring plank is eliminated, and as a result, the complexity of the truck reduced to a minimum, without lessening its supporting strength in any degree. In thus interlocking the side frame upon the bolster, a simple, efficient and durable structure is obtained, the supporting and sustaining strength of which is greatly increased, without the use of bolts, rivets and the like.

In each column, just beneath the intermediate arch bar is a slot 21, through which the brake levers 22 pass. A link 23 connects these levers upon the outside of the side frame, so as to operate the brakes in unison.

The openings or slots 21 formed in the columns of the side frames, constitute guides for the levers and direct their positive operation against undue torsion that is exerted when the brakes are applied. In providing this particular form of side frame, adapted to accommodate and guide the brake levers, an efficient safety precaution is included, whereby the danger of going under the car for repairing purposes, is eliminated. Thus, it will be obvious that a side frame is designed in which the additional intermediate supporting arch bar increases and distributes the weight of the car when loaded, to its full capacity; and also one in which the column posts act as substantial guides for the brake mechanism, thereby increasing the safety of the truck throughout.

Having thus fully described my invention, what I claim is:

1. In a car truck, the combination of side frames including top, intermediate, and bottom arch bars, column posts intersecting the

said arch bars, and a bolster having its ends located between and interlocked with the said column posts.

2. In a car truck, the combination of side frames, including top, intermediate, and bottom arch bars, column posts formed integral therewith and intersecting the said arch bars, and a bolster having its ends located between and interlocked with the said column posts.

3. In a car truck, the combination of side frames including top, intermediate and bottom arch bars, column posts formed integral therewith and intersecting the said arch bars, lugs formed upon the inner faces of said column posts, and a bolster having its ends formed with recesses whereby it is interlocked with the side frames.

4. In a car truck, the combination of side frames, each of which is provided with a plurality of column posts, and with a plurality of spring supporting platforms, a bolster having bifurcated ends interlocked with said column posts, and springs seated upon each of said platforms and engaging said bolster.

5. In a car truck, the combination of side frames, each of which is provided with a plurality of column posts, and with a plurality of spring supporting platforms, a bolster having bifurcated ends interlocked with said column posts, and springs seated upon each of said platforms and engaging said bolster, each of said side frames being provided with an arch bar interposed between the said bolster.

6. In a car truck, the combination of side frames, including top, intermediate and bottom arch bars, column posts formed integral therewith and intersecting the said arch bars, lugs formed upon the inner faces of said column posts beneath the top and intermediate arch bars respectively, and a bolster having its ends provided with corresponding recesses to receive said lugs, whereby the bolster is interlocked with the said frames.

7. In a car-truck, the combination of side frames, including top, bottom and intermediate arch bars, supporting platform surfaces formed upon the bottom and intermediate arch bars, column posts extending between and intersecting said arch bars adjacent the supporting or platform surfaces, a bolster having its ends interlocked between said column posts, and a plurality of springs arranged on each support or platform surface, whereby the strength of the truck will be equally apportioned.

8. In a car truck side frame, the combination with a plurality of arch bars, of supporting or platform surfaces formed upon each of said arch bars, and column posts intersecting said arch bars.

9. In a car truck side frame, the combination

tion with top and bottom arch bars, of an intermediate arch bar extending between said top and bottom arch bars, and column posts extending between and intersecting said arch bars.

5 10. In a car truck side frame, the combination with top and bottom arch bars, of an intermediate arch bar formed integral therewith and extending between said top

and bottom arch bars, and column posts 10 formed integral with and intersecting the said arch bars.

In testimony whereof I affix my signature in presence of two witnesses.

NICHOLAS E. HIRSCH.

Witnesses:

LUDWIG JOHNSON,
CHARLES GREEN.