

No. 764,760.

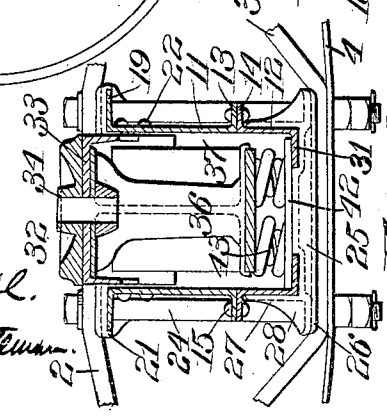
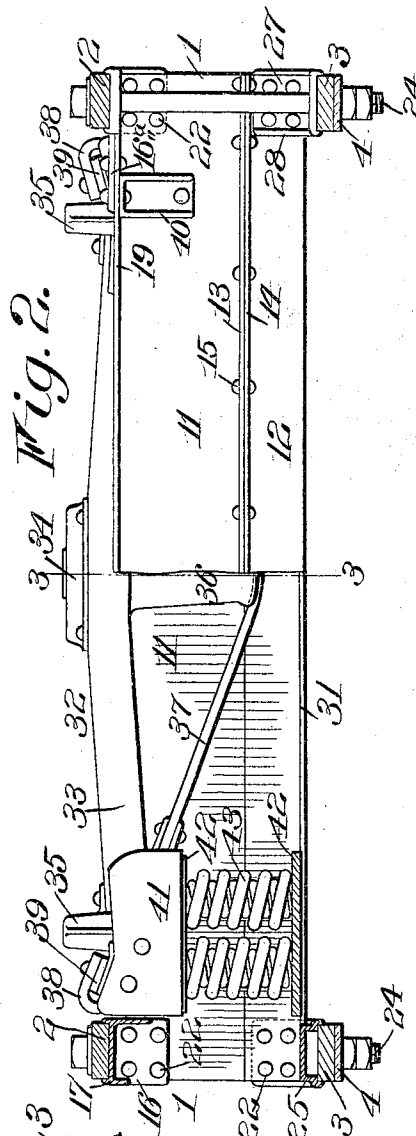
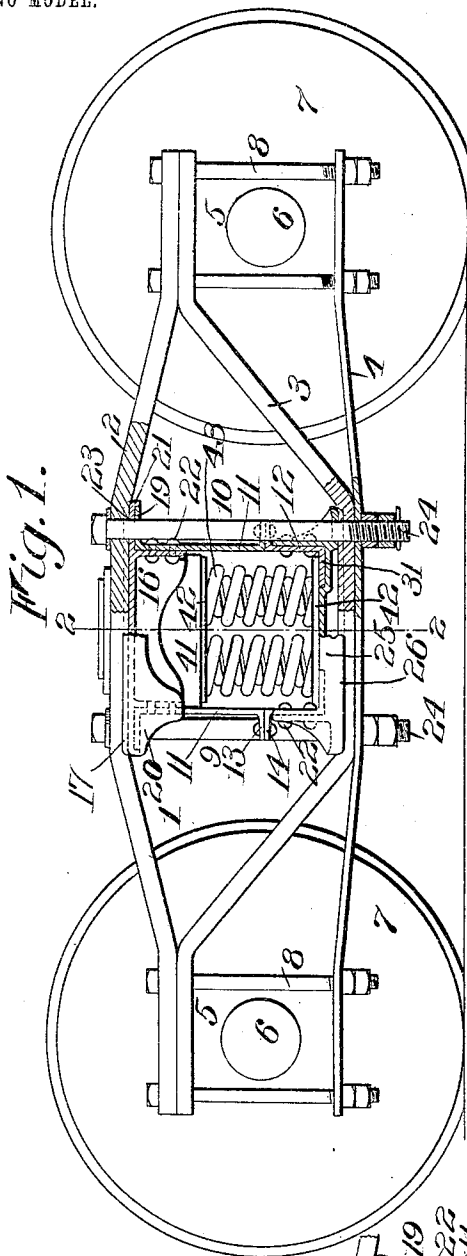
PATENTED JULY 12, 1904.

R. H. PARKS.
CAR TRUCK.

APPLICATION FILED JUNE 15, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses.

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No. 764,760.

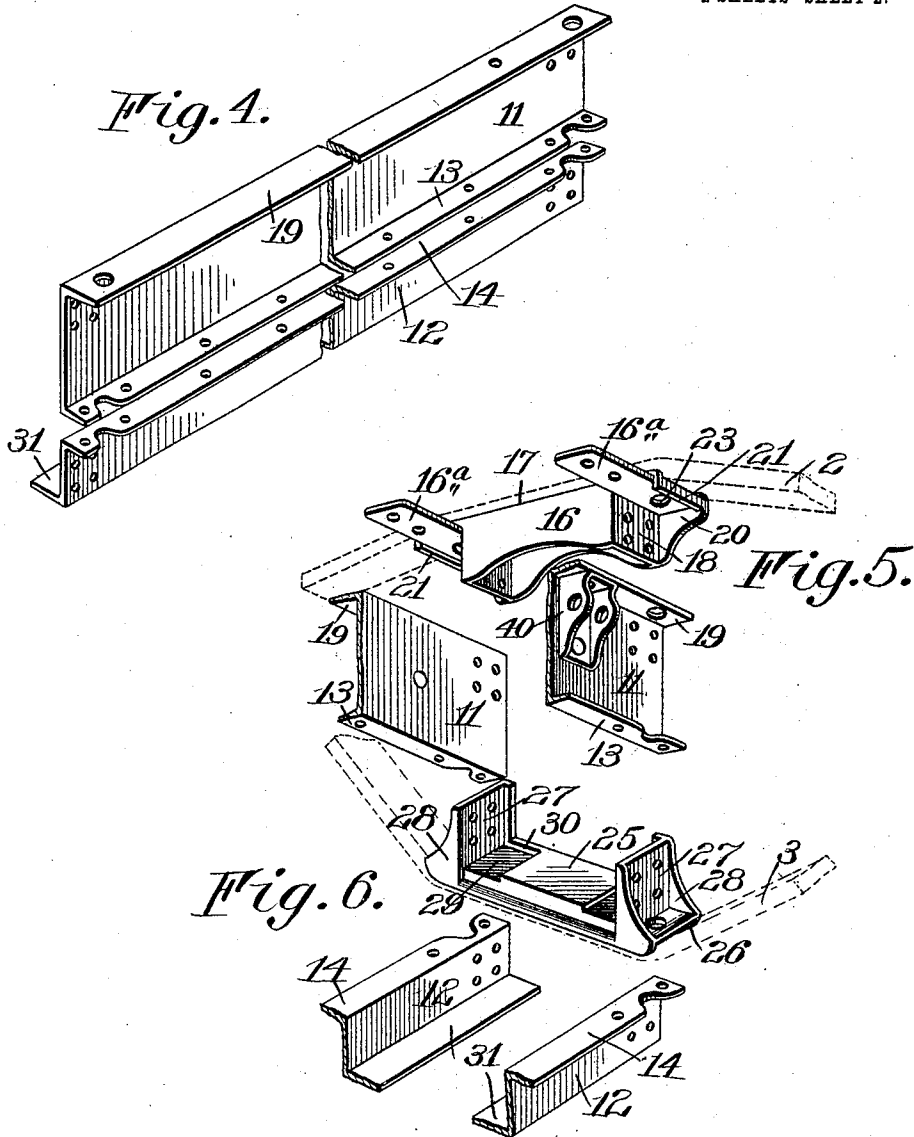
PATENTED JULY 12, 1904.

R. H. PARKS.
CAR TRUCK.

APPLICATION FILED JUNE 16, 1903.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

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TO WILSON W. BUTLER, OF NEW YORK, N. Y.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 764,760, dated July 12, 1904.

Application filed June 15, 1903. Serial No. 161,501. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. PARKS, of the city of Rochester, county of Monroe, and State of New York, have invented certain
5 new and useful Improvements in Car-Trucks; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to car-trucks, and has for its object the production of a car-truck especially adapted for heavy duty and hard-service conditions, wherein the cost of
10 manufacture may be materially reduced and the facility of repairing greatly increased by the employment largely of commercial rolled stock material.

It is also among the objects of my said invention to enable the construction of a truck of the character specified possessing the maximum rigidity possible within the limitations and restrictions imposed upon car-truck construction, as is well known to those skilled in
25 the art.

To these and other ends my invention consists in certain novel features, to be hereinafter more fully described, and pointed out in the claims hereunto annexed.

In the drawings, Figure 1 is a side elevation, partly in section, of a car-truck embodying my said invention. Fig. 2 represents a vertical section along the line 2 2 of Fig. 1, the bolster being shown in elevation. Fig. 3
35 is a transverse sectional view on the line 3 3 of Fig. 2 looking in the direction of the arrow. Fig. 4 is a perspective view of the transoms detached. Fig. 5 is a similar view of the upper transom support or casting, showing the channel-beams detached; and Fig. 6 is a similar view of the lower support or casting, the Z-bars being shown detached.

Similar reference-numerals in the several figures indicate similar parts.

In the present embodiment of my invention I have depicted a car-truck particularly adapted to heavy-freight service and as shown comprises the usual side frames 1 1, each made up of the upper and lower truss-bars 2 3, re-

spectively, and the brace-rod 4. Between the
50 ends of the truss-bars 2 3 and the brace-rod 4 are formed the usual pedestals carrying the axle-boxes 5 5, in which are journaled the axles 6 6, carrying the wheels 7 7, the usual tie-bolts 8 8 passing through said parts to secure the
55 same rigidly in position.

Located between the upper and lower truss-rods 2 3 intermediate their length are the transoms 9 10, connecting the two side frames 1 1. In order to secure the maximum rigid-
60 ity, these transoms 9 10 are each preferably composed of a channel-bar 11 and a Z-bar 12, the adjacent abutting flanges 13 14 of which are rigidly secured by the rivets 15 passing there-
65 through. In this construction the channel-bar 11 extends from the outer edge of one side frame to the outer edge of the oppos- ing side frame.

Between the end of the channel-bar 11 and the truss-bar 2 is interposed a support or
70 chair, preferably made up of a malleable-iron casting 16 or the like, provided with the upwardly-extending spaced flanges 17 17, into which the upper truss-bar 2 is seated and hav-
75 ing upon each end the right-angled recess 18, into which the upper flange 19 of the channel-bar 11 is firmly seated, an abutment 20 being provided upon this casting, against which the end of said channel-bar rests. At each end of
80 this casting 16 is formed an overhanging flange 21, adapted to overlap the flange 19 of the channel-bar 11, the purpose of which will more fully hereinafter appear. The inner face of each of these upper castings 16 extends
85 downwardly to receive the longitudinal thrust of the bolster. Rivets 22 may be employed, as shown, for securing the channel-bars 11 and said castings 16 together, apertures 23 being provided in the upper portion of said
90 castings, through which may pass the tie-bolts 24 24. To reinforce the side frames and the transoms, laterally-extending lugs 16^a 16^a may be provided to rest upon the top of the upper flanges 19 19 of the channel-bars 11, an
95 angle-brace 40 being provided upon the channel-bar to reinforce the upper flange thereof. Through these lugs 16^a and the upper flange 19 and angle-brace 40 may be passed rivets for

securing the parts together. These angle-braces 40 also constitute supports for the brake-rigging.

Immediately beneath the upper casting 16 is provided a lower casting 25, having offset flanges 26 26, between which the lower truss-bar 3 rests. Upon the upper surface and at each end of the casting 25 are provided the upwardly-extending shoulders 27 27, webbed, as at 28 28, a substantially right-angled recess 29 being formed adjacent each shoulder, leaving an abutting flange 30 upon the outer side of said casting. Into these recesses 29 are adapted to be riveted the ends of the Z-bars 12 12, the ends of said bars abutting against the flange 30 and the inwardly-extending flange 31 resting in the lower portion of the recess 29 in such manner that the upper surfaces of said flanges 31 and the central or intact portion of the casting 25 will be flush or continuous.

The abutting flanges 13 14 of the channel and Z bars, respectively, being united by the rivets 15 or other suitable means, it will be seen that the transoms connecting the side frames 1 1 are united by the end pieces or castings 16 and 25 to form one solid unitary structure capable of resisting to the maximum degree all forces acting upon the side frames to produce a distortion or twisting action between the side frames and transoms. While the composite transom produced by the channel-bar and Z-bar is preferred as possessing the maximum rigidity, it will be understood that a transom may be produced in accordance with my invention composed of a single Z-bar, the upper flange thereof corresponding with the flange 19 of the channel-bar and the lower flange corresponding to the lower flange of the Z-bar 12; but while this construction may be adopted it would not possess the additional rigidity secured by the flanges 13 14 of the channel and Z bars, respectively. These transoms 9 10, respectively, together with the upper and lower seats or castings 16 25, respectively, are firmly secured in the side frame 1 1 between the upper and lower truss-bars 2 3, respectively, by the tie-bolts 24 passing also through the brace-rod connecting the axle-boxes. Interposed between these transoms 9 10, respectively, is a bolster 32, comprising in the present construction an arched channel-beam 33, upon the top of which, intermediate its length, is secured the pivot-block 34, about which the truck turns as its center. Near each end of said bolster are provided the side bearings 35 35 of any suitable construction. Depending from this bolster at the center is a bridge-piece 36, beneath which passes the truss member 37, anchored at each end of the bolster in any suitable manner. In the present embodiment the ends of this truss member are bent back, as at 38, embracing the upturned extremities 39 of the beam 33 of the

bolster, rivets or the like being passed through to secure the parts together.

At each end of the bolster is provided a spring-seat 41, so disposed upon said bolster that the ends thereof are immediately adjacent the inner faces of the castings 16 16, whereby longitudinal thrust of the bolster will be received and lateral movement prevented by the castings 16 16. These end pieces 41 41 are of such a width as to slidably rest between the transoms 9 10, respectively, in such a manner as to transmit the lateral thrust between said bolster and transoms. Beneath these end pieces or supports 41 41 upon the bolster are plates 42 42, comprising spring-platforms. One of these plates 42 is located beneath the supports 41 41 upon the bolster and preferably rests upon and is supported by the inturned flanges 31 31, respectively, of the Z-bars 12 12, rivets or other suitable means being employed for securing said plates in position. Interposed between these spring-platforms 42 42 and the supports 41 upon each end of the bolster are helical or other suitable springs 43 43, adapted to sustain the weight of the car-body and to form a resilient support for the bolster. However, it will be understood that I do not limit myself to the use of any particular form of bolster.

It will be seen from the foregoing that a car-truck is produced from commercial forms, whereby the maximum rigidity is secured within the limited weight and the prescribed cost of manufacture. By forming the transoms of channel and Z bars united to form a unitary structure and securing the ends of the transoms thus formed in the supporting seats or castings carried by the side frames all forces tending to twist or distort the relative positions of the side frames and transoms are most effectually resisted. The overhanging flanges 21 21 upon the upper castings extending over the edges of the upper flanges 19 of the transoms will transmit the lateral thrusts of the bolster received thereon through the castings 16 to the opposing transom, thereby practically doubling the resisting power of the transoms against lateral thrust of the bolster. End thrust of the bolster is received upon the upper castings 16 and transmitted directly to the side frames, thus avoiding the weakness necessarily resulting from intervening structure.

It is obvious that in the construction of a truck of this character, in which commercial rolled forms are employed, repairs may be readily made by duplicating the parts from stock material.

While I have adopted in the present embodiment of my invention certain details in construction, it of course will be understood that I do not so limit myself, as many modifications and changes might suggest themselves to those skilled in the art which could

be made without departing from the spirit of my invention.

I claim as my invention—

1. A car-truck, including side frames and wheels, and angle-bar transoms resting in recessed seats carried by said frames.
2. A car-truck, including side frames, and wheels journaled therein, of Z-bar transoms resting in recessed seats carried by said frames.
3. A car-truck, including side frames and wheels journaled therein, transoms connecting said frames, and transom-supports having recesses to receive said transoms and side frames to secure said parts together.
4. A car-truck including side frames and wheels journaled therein, angle-bar transoms connecting said frames, and transom-supports embracing the side frames and provided with recesses to receive the ends of said transoms.
5. A car-truck, including side frames, and wheels journaled therein, Z-bar transoms connecting said frames, and transom-seats fitted upon said side frames and provided with recesses to receive the ends of said transoms.
6. A car-truck, including side frames, and wheels journaled therein, Z-bar transoms connecting said frames, and transom-seats embracing said side frames, and securing the ends of said transoms.
7. In a car-truck, a transom made up of an angle-bar, and a Z-bar adapted to be secured thereto.
8. In a car-truck, a transom, made up of a channel-bar, and a Z-bar rigidly secured thereto.
9. In a car-truck, a transom, made up of a channel-bar, and a Z-bar having its upper flange rigidly secured to the lower flange of the channel-bar.
10. In a car-truck, a transom, made up of a channel-bar having its two flanges extending outwardly and a Z-bar having its outwardly-extending flange secured to the lower outwardly-extending flange of said channel-bar.
11. In a car-truck, a transom-seat adapted to unite the ends of the transoms and the side frames, comprising a flanged portion adapted to embrace the side frame, and recessed portions adapted to receive the ends of said transoms.
12. In a car-truck, a transom-seat adapted to unite the ends of the transoms and to embrace the side frames, said seats being provided with recesses to receive the ends of the transoms and overhanging flanges to embrace the outer surfaces thereof.
13. In a car-truck, a transom-seat adapted to receive the ends of the transoms, having spaced flanges for embracing the side frame, shoulders adapted to engage the transoms, and recesses into which the ends of said transoms fit.
14. In a car-truck, a transom support or seat, having recesses into which said transoms

fit, flanges adjacent said recesses against which the ends of said transoms abut and flanges adapted to engage the side frames.

15. In a car-truck, a transom support or seat, having a portion adapted to extend between the transoms, recesses to receive the ends of the transoms, laterally-disposed lugs adapted to secure the tops of the transoms and portions adapted to engage the outer sides of said transoms to resist lateral motion thereof.

16. In a car-truck, the combination with the side frames, of transom seats or supports having flanges engaging said side frames, transoms connecting said side frames having inwardly-extending flanges engaging recesses in the lower supports and outwardly-extending flanges engaging recesses in the upper supports.

17. In a car-truck, the combination with the side frames, of transom seats or supports having flanges engaging said side frames, transoms connecting said side frames having inwardly-extending flanges engaging recesses in the lower supports and outwardly-extending flanges engaging recesses in the upper supports, and flanges upon said seats or supports against which the ends of said transoms abut.

18. In a car-truck, the combination with the side frames, of transom seats or supports, spaced flanges upon said supports embracing the side frames, transoms connecting said side frames comprising bars having inwardly-extending flanges resting in recesses in said support, and having their outer edges abutting shoulders upon said supports, and outwardly-extending flanges upon said transom-bars engaging recesses in the transom-support, the upper portion of said transoms abutting shoulders upon said supports extending downwardly upon the inner sides of said transoms.

19. In a car-truck, the combination with the side frames and wheels journaled therein, of transoms connecting said frames, comprising transom-bars having inwardly-extending flanges, at their lower ends, a spring seat or platform supported upon said flanges, a bolster between said transoms and springs interposed between said spring-seats and bolster.

20. In a car-truck, the combination with the side frames and wheels journaled therein, of transoms comprising transom-bars having inwardly-disposed flanges at their lower portions and outwardly-disposed flanges at their upper portions, lower supports having recesses to receive the lower ends of said transoms and shoulders abutting the outer sides of said transoms, spring-seats supported upon said inwardly-disposed flanges, upper transom-supports having recesses adapted to receive the upper ends of said transoms and laterally-extending lugs to secure the tops of said transoms, downwardly-extending shoulders interposed between said transoms to secure them from lateral movement and a bolster-support upon said spring-seats, and adapt-

ed to transmit its longitudinal thrust to said upper transom-supports.

21. In a car-truck, the combination with the side frames and wheels journaled therein, of
5 transoms comprising transom-bars having inwardly-disposed flanges at their lower portions and outwardly-disposed flanges at their upper portions, lower supports having recesses to receive the lower ends of said transoms and
10 shoulders abutting the outer sides of said transoms, spring-seats supported upon said inwardly-disposed flanges, upper transom-supports having recesses adapted to receive the upper ends of said transoms and laterally-

15 extending lugs to secure the tops of said transoms, a bracket located below said lugs upon said transom-bars to reinforce the upper flange thereof, downwardly-extending shoulders interposed between said transoms to secure them from lateral movement, and a bol-
20 ster supported upon said spring-seats, and adapted to transmit its longitudinal thrust to said upper transom-supports.

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