

(No Model.)

2 Sheets—Sheet 1.

E. PECKHAM.  
CAR TRUCK.

No. 419,877.

Patented Jan. 21, 1890.

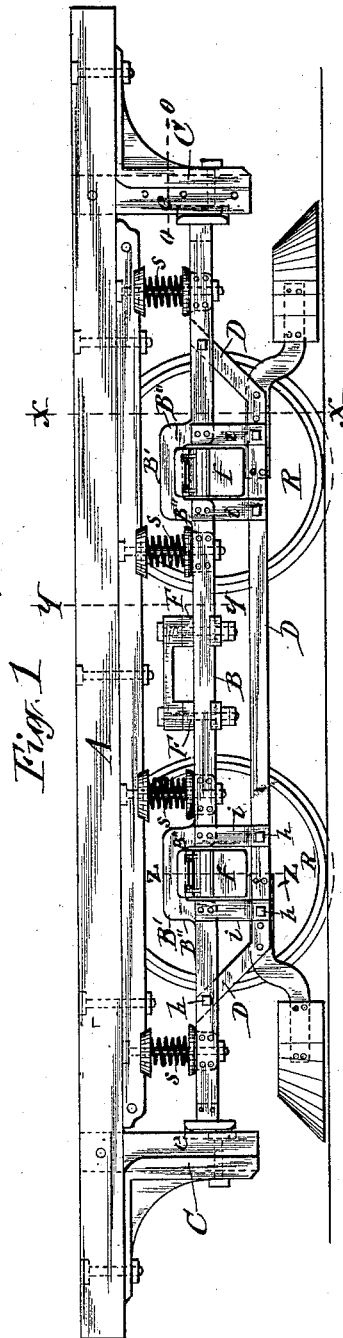


Fig. 1

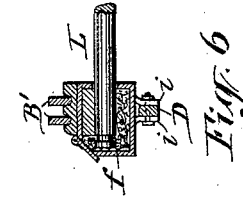


Fig. 6

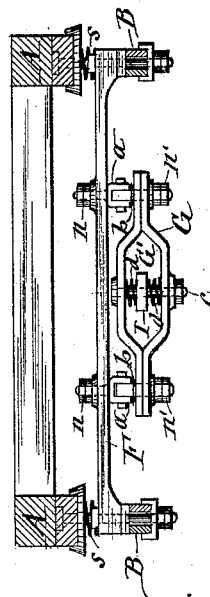


Fig. 5

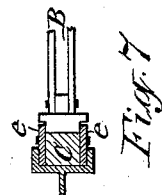


Fig. 7

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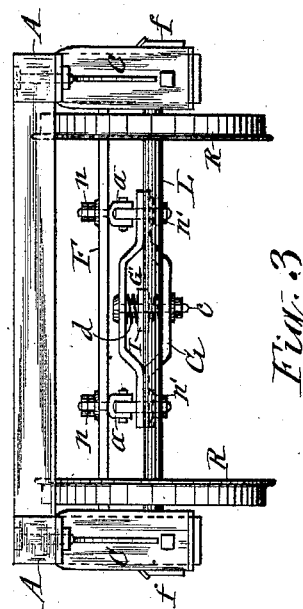
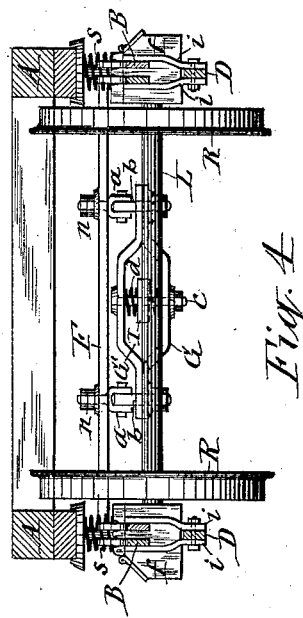
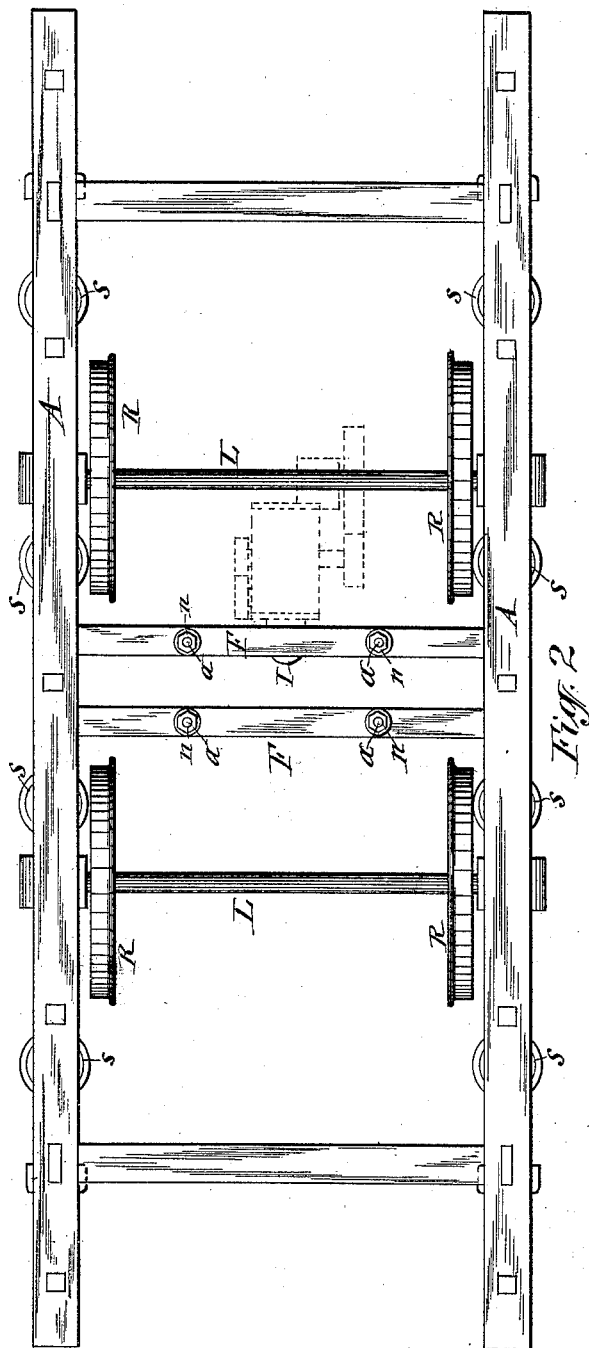
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2 Sheets—Sheet 2.

E. PECKHAM.  
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No. 419,877.

Patented Jan. 21, 1890.



WITNESSES:

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J. J. Grass

INVENTOR:

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# UNITED STATES PATENT OFFICE.

EDGAR PECKHAM, OF NEW YORK, N. Y.

## CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 419,877, dated January 21, 1890.

Application filed September 17, 1889. Serial No. 324,223. (No model.)

### *To all whom it may concern:*

Be it known that I, EDGAR PECKHAM, of New York, in the county of New York, in the State of New York, have invented new and useful Improvements in Car-Trucks, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the construction of the trucks of street-railway cars, especially of electric cars; and the invention consists in the improved construction and combination of parts, hereinafter fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a side elevation of a car-truck embodying my invention. Fig. 2 is a top plan view of the same. Fig. 3 is an end view. Figs. 4 and 5 are vertical transverse sections respectively on lines *x x* and *y y*, Fig. 1. Fig. 6 is a vertical transverse section of one side of the truck on line *z z*, Fig. 1; and Fig. 7 is a horizontal transverse section on line *o o*, Fig. 1.

Similar letters of reference indicate corresponding parts.

*A A* represent either the longitudinal sills of the car-body or the longitudinal top stringers of the truck-frame.

*R R* denote the car-wheels, *L* the axles thereof, and *ff* the journal-boxes of said axles.

*B B* represent the body-supporting side beams of the truck. Said beams are formed with horizontal central and end portions and with saddles *B' B'* between the aforesaid portions and integral with both, by which saddles the side beams ride on the journal-boxes *ff*. The saddles rise from the main portions of the side beam with vertical offsets *B''*, which embrace the sides of the upper portions of the journal-boxes and serve to confine said boxes a uniform distance apart. The end portions of the side beams *B* extend under the end portions of the car-body, as shown in Fig. 1 of the drawings, and on said end portions and central portions of the side beams are mounted the car-supporting springs *s s s*. I preferably employ two of such side beams on each side of the truck, as shown in Figs. 4, 5, and 6 of the drawings, and place the two beams a sufficient distance apart to allow the ends of the truss *D* to be inserted between

said beams and secured thereto by bolts *h h*, passing transversely through the said parts. Said truss is underneath the side beams, and is connected to the vertical offsets *B'' B''* of the saddles, independently of the beams *B B*, by straps *i i*, rigidly attached to and suspended from said offsets, and connected to the truss by bolts passing through the lower ends of the straps and through the truss. Said straps closely embrace the sides of the lower portions of the journal-boxes, and thus further sustain the same in their positions. I prefer to employ for said attachment screw-threaded bolts with nuts, so that by unscrewing the nuts and removing the bolts from their attachments the truss is allowed to drop away from the truck, and then by either raising the truck or supporting the truck stationary while lowering the wheels *R R* into a pit the said wheels are readily removed from the truck when desired.

In order to relieve the springs *s s* from lateral strain incident to the draft on the car-body when drawn by horses, or the inertia of the car-body of an electrically-propelled car, I rigidly attach to the end portions of the car-sills *A A* abutments *C C*, which extend across the ends of the side beams *B B*, as illustrated in Fig. 1 of the drawings. Said abutments prevent the side beams from moving longitudinally on the truck and cause the car to be pushed by said beams when propelling-power is applied to the car. To guard against lateral swaying of the side beams *B B*, I attach to opposite sides of the abutments cheek-pieces or vertical guides *e e*, between which the ends of the side beams are held.

On an electric-car truck I attach to the central or main portions of the side beams *B B*, preferably to the top thereof, a cross beam or beams *F F*. Only one of said latter beams is required in case only one electromotor is to be connected to the car. Inasmuch as the form of the said motor is not a material part of my invention, I have merely indicated its position by dotted lines in Fig. 2 of the drawings. It is merely the means of supporting the motor at its heel *I* to which my invention pertains. The object of my invention is to provide a support which shall effectually guard against lateral movement of the said

portion of the motor, and at the same time afford it the requisite longitudinal and vertical play. For this purpose I employ a yoke G, which is elongated in a direction crosswise of the truck and formed with the central opening G', and hung at each end to the under side of the cross-beam F by two shackles *a a*, which are formed with stout screw-threaded stud-pins and rigid pendent perforated ears, and are secured to the beam F by the stud-pins passing through the beam from the under side thereof, and provided on their upper protruding ends with nuts *n n*, by which they are drawn tightly up against the beam, so as to firmly hold them in place. Between the ears of each shackle is inserted the upper end of a hanger *b*, which is hinged thereto by a bolt passing through the ears and hanger. The ears, standing in planes at right angles to the axle L, allow the hangers to oscillate in such planes. The lower ends of the hangers pass through the end portions of the yoke G, and are screw-threaded and provided with nuts *n'* on the under side of the yoke to connect the latter to the hangers.

The heel I of the motor is inserted in the opening G' of the yoke, and a bolt *c* passes vertically through the yoke and through an aperture in the heel I to sustain the latter from lateral movement. In the opening G' above and below the heel I are placed the springs *d d*, which elastically support the heel I in a vertical direction, while the oscillatory hangers *b b* allow the motor a limited rearward play incident to the vertical oscillation of its heel when starting the motor.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the journal-boxes, car-body, and saddles riding on said journal-boxes, longitudinal beams connecting said saddles, and longitudinal trusses suspended from the saddles independently of the aforesaid beams and supporting the latter, as set forth.

2. In combination with the journal-boxes and car-body, saddles riding on said journal-boxes, longitudinal beams uniting the saddles at the sides of the journal-boxes and extending under the end portions of the car-body, springs interposed between the end portions of the longitudinal beams of the car-body, and trusses suspended from the saddles independently of the longitudinal beams and supporting the end portions of the latter, as set forth and shown.

3. In combination with the journal-boxes and car-body, saddles riding on the said journal-boxes and formed with vertical offsets embracing the upper portions of the sides of the journal-boxes, longitudinal beams extending from said offsets, straps suspended from said offsets and embracing the lower portions of the sides of the journal-boxes, and longitudinal

trusses connected to said straps and supporting the end portions of the aforesaid longitudinal beams, substantially as described and shown.

4. In combination with the journal-boxes and car-body, the side beams B B and saddles B' B', formed in one piece and with the vertical offsets B'' B'', springs mounted on the main portions of said side beams and supporting the car-body, straps *i i*, rigidly attached to the offsets B'' B'', and the truss D, connected to said straps, substantially as described and shown.

5. In combination with the journal-boxes and car-body, the side beams B B and saddles B' B', formed in one piece and with the vertical offsets B'' B'', embracing the sides of the journal-boxes, and the end portions of said beams extending under the end portions of the car-body, springs mounted on the central portions of said side beams and supporting the car-body thereat, and springs mounted on the end portions of the side beams and supporting the ends of the car-body, substantially as set forth.

6. In combination with the journal-boxes, car-body, and side beams supported on the journal-boxes, and extending under the end portions of the body, abutments secured to the car-body and extending across the ends of the aforesaid beams, substantially as described and shown.

7. In combination with the journal-boxes and car-body, side beams supported on the journal-boxes and extending under the end portions of the body, springs interposed between said beams and car-body at the central and end portions thereof, and abutments secured to the car-body, and extending across the ends of the aforesaid side beams, substantially as described and shown.

8. In combination with the body-supporting side beams supported on the journal-boxes and extending under the ends of the body, trusses under the said side beams, and detachably connected thereto to allow the axles and wheels to be removed downward from the truck-frame, as set forth.

9. A truck-frame comprising body-supporting side beams B B, formed with horizontal central and end portions, and with saddles B' B' between the said portions, and rising from the same with vertical offsets, and embracing the top portions of the journal-boxes, body-supporting springs mounted on the central and end portions of the said beams, abutments C C, secured to the car-body and extending across the ends of the side beams, and the trusses D D under the said beams, and connected thereto by removable bolts, substantially as described and shown.

10. In an electric-car truck, a yoke elongated in a direction crosswise of the truck, and suspended at each end from the truck-frame by hangers suspended rigidly, laterally, and oscillatory in a direction lengthwise

of the truck, and the motor supported at its heel elastically in the center of said yoke, substantially as described and shown.

11. In combination with the side beams supported on the journal-boxes, the cross-beam F, secured to said side beams, the shackles *a*, each formed with two rigid pendent perforated ears, the hangers *b b*, inserted between the ears of the shackles and hinged thereto, the yoke G, attached at opposite ends to said hangers and formed with the central opening G', the heel I of the motor inserted in said opening, the bolt *c*, passing vertically through the yoke and heel, and springs *d d*, interposed between the motor and heel I, at the top and bottom of the latter, substantially as described and shown.

12. In combination with the car-body, side beams B B, extending under the ends of the car-body, and the motor supported at its heel by said side beams, the abutments C C, secured to the car-body and extending across the ends of the side beams, and the vertical guides *e e*, secured to the abutments at opposite sides of the abutting ends of the side beams, substantially as described and shown.

In testimony whereof I have hereunto signed my name this 14th day of September, 1889.

EDGAR PECKHAM. [L. s.]

Witnesses:

THORNLEY DICKSON,  
JOHN W. SPEAR.