

(No Model.)

2 Sheets—Sheet 1.

E. PECKHAM.
CAR TRUCK.

No. 555,530.

Patented Mar. 3, 1896.

Fig. 1

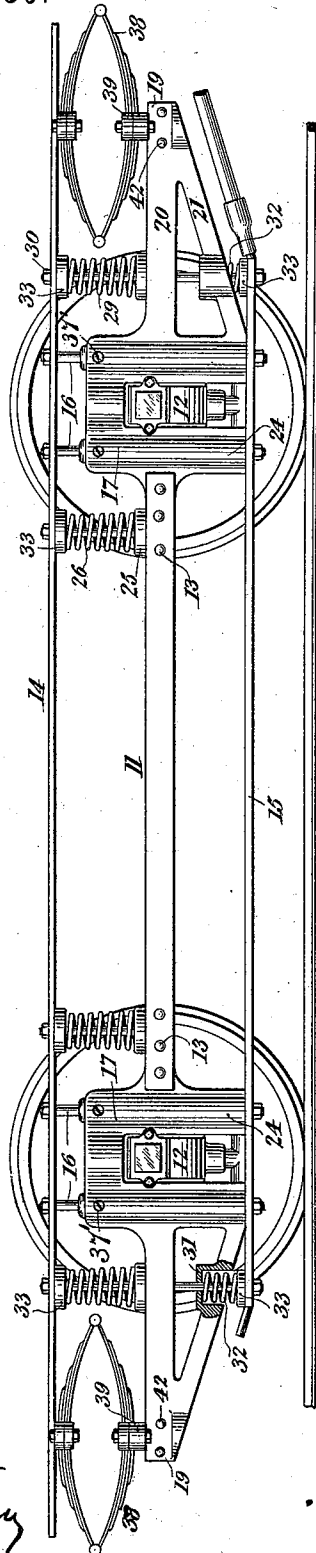
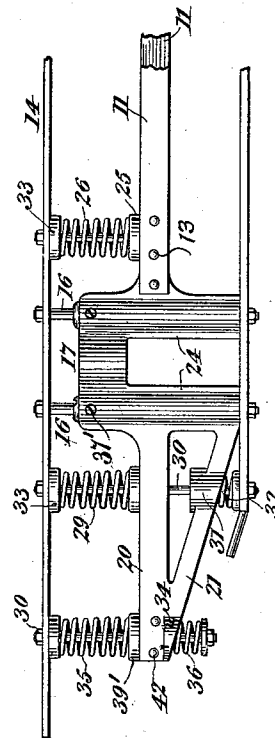


Fig. 2



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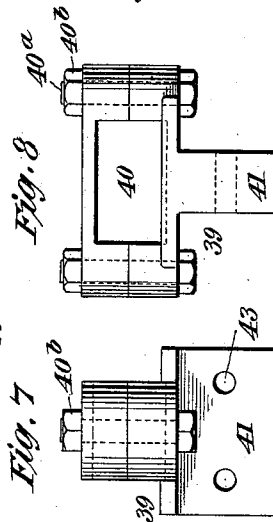
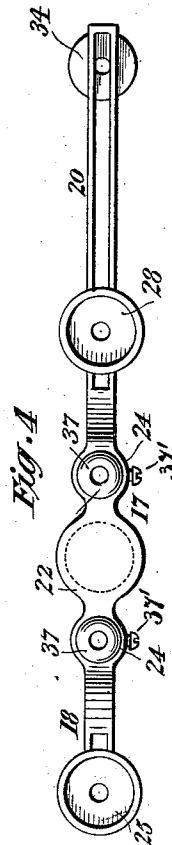
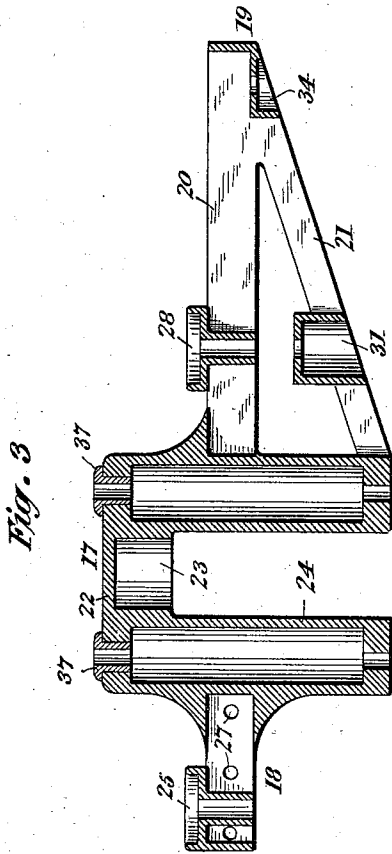
(No Model.)

E. PECKHAM.
CAR TRUCK.

2 Sheets—Sheet 2.

No. 555,530.

Patented Mar. 3, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDGAR PECKHAM, OF NEW YORK, N. Y.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 555,530, dated March 3, 1896.

Application filed June 11, 1895. Serial No. 552,382. (No model.)

To all whom it may concern:

Be it known that I, EDGAR PECKHAM, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Car-Trucks, of which the following is a specification.

This invention has reference to car-trucks and particularly to such trucks as are employed for street-cars.

The object of the invention is to simplify the construction of the truck-frame by reducing the number of parts of which the sides of such frames are ordinarily composed.

A further object is to increase the strength of the side frames without increasing the weight of the structure, and to provide such side frames with means for accommodating at given points springs of different types, made use of for neutralizing shocks imparted to the wheels and body of the car, and for preventing the car from teetering or oscillating when in motion.

A truck-frame constructed according to my present invention will require less labor and expense in its production, will be less liable to become deranged in service, and the parts composing it may be more quickly assembled than is the case with trucks as generally constructed.

My invention is hereinafter described in connection with the accompanying drawings, and in claims at the end hereof the features of novelty have been specified.

In the drawings, wherein like parts are indicated by like numerals of reference in the several views, Figure 1 is a side elevation of a truck embodying my improvements. Fig. 2 is a side elevation of one end of the truck-frame equipped with a spiral spring at the extreme end instead of with an elliptical spring, as shown in Fig. 1. Fig. 3 is a vertical longitudinal section through the integrally-formed end portion of the truck-frame. Fig. 4 is a ground plan of the complete end structure shown in Fig. 3. Fig. 5 is a side elevation, and Fig. 6 a central vertical section, of a bushing which I employ in combination with the rods which serve to connect the upper chord or sill of the truck with the longitudinal beam extending across the bottoms of the yokes of the frame. Fig. 7 is a

side elevation, and Fig. 8 an end elevation, of a socket for supporting an elliptical spring at the end of the truck-frame, as shown in Fig. 1. Fig. 9 is a side elevation, and Fig. 10 a vertical section, of a socket for supporting a spiral spring adapted to be used in substitution of the elliptical spring at the end of the truck-frame, as shown in Fig. 2.

Referring to the drawings, 11 indicates the longitudinal side beams connecting together the end portions of the side frames, which include the yoke structures adapted to engage with the axle-boxes 12 in the usual manner. The longitudinal beams 11 are duplex, as shown in Fig. 2; and are riveted to the end structures of the frame, as at 13. The upper chord or sill of the frame is indicated by 14, and 15 is a flat beam extending longitudinally beneath the two yoke structures and held in place by the bolts 16 passing through the vertical members of the yoke structures and connecting at the top with the sill or chord 14.

Each end portion of the frame constitutes a single casting, as shown best in Figs. 3 and 4, and comprises the yoke structure 17, having the flange or extension 18, to which the longitudinal beam 11 is adapted to be riveted, and the end extension 19 consisting of the horizontal member 20 and the under truss 21, which parts are preferably made duplex.

The yoke structure 17 of the end portions of the frame is novel in configuration, as will be seen from Fig. 4. It comprises an upper horizontal member 22, which is adapted to rest upon the axle-box 12, and in its under surface it is provided with a recess or socket 23 adapted to receive an elastic cushion or spring to co-operate with the top of the axle-box. The horizontal member 22 is preferably of approximately circular ground plan, as shown in Fig. 4. The vertical members 24 of the yoke structure which are adapted to extend downward along the sides of the axle-box are made hollow to permit of the passage therethrough of the bolts 16, which pass through the upper chord, 14, and lower longitudinal beam, 15. The vertical members 24 are also of circular ground plan, as seen in Fig. 4. The flange 18 forming a part of this integral end portion of the frame is provided with a perforated seat 25 to receive the spiral spring 26 and with holes 27 for the rivets 13, whereby the

longitudinal side beam 11 is secured to said end portion of the frame. The end extension 19 at the front of the yoke structure comprises the horizontal part 20 and the under 5 truss part 21, as stated, the said end extension being shown divided longitudinally, except where the perforated seat 28 is located, the said seat being adapted to receive a spiral spring, as 29, surrounding a bolt 30, which 10 passes through the sill 14 and through the perforated seat 28, and also through the socket 31 formed in the under truss member 21 of said end extension. The socket 31 is adapted to receive a counter-spring 32 for the spring 15 29, the said counter-spring surrounding the lower end of bolt 30, which latter extends through the bottom longitudinal beam, 15, and its end provided with a nut, as shown. Washers 33 are placed between the sill 14 and 20 the upper ends of spiral springs 29 and 26, and also between the lower longitudinal beam, 15, and counter-springs 32, as indicated. At the extreme outer end of the extension 19 there is provided a socket 34 for receiving a 25 spiral counter-spring 36 for the spiral spring 35 when such a type of spring is made use of at that point in lieu of an elliptical spring. In the upper ends of the vertical members 24 of the yoke structures are the removable 30 bushings 37, which are preferably made of cast-steel. These bushings are made use of for the purpose of guarding against the wearing of bolts 16 upon the yoke in the longitudinal and lateral movements that may be im- 35 parted to the car-body and through the same to said bolts 16. The bushings 37 are held in place by screws 37', easily removable.

In Fig. 1 the extreme end of the truck-frame is equipped with an elliptical spring 40 38, as shown, which is interposed between the end extension 19 and the sill or chord 14. When an elliptical spring is to be used in this position the socket 39 (shown in Figs. 7 and 8) is made use of, the said spring being 45 clamped within the opening 40 of said socket, the upper part of the socket being in two sections, which are held together by the bolts and nuts 40^a and 40^b, as shown in Figs. 7 and 8. That portion of the socket 39 marked 41 50 is adapted to enter the longitudinally-divided parts of the horizontal extension 20 of the end casting and to be secured therein by rivets 42, the part 41 of the socket being formed with rivet-holes 43, as shown.

In Fig. 2 a spiral spring 35 is substituted for the elliptical spring 38, and in this case the socket 39' (shown in Figs. 9 and 10) is made use of, the same being secured in place by 55 inserting the portion 41' having rivet-holes 43' between the longitudinally-divided portion 20 of the end extension and riveting the same in place, as when applying the socket for the elliptical spring. The parts of the sockets 39 39', which enter the opening in part 20 of 60 the end extension 19, are of the same configuration in both cases, thus rendering said sock-

ets interchangeable to permit the ready substitution of one type of spring for the other.

The making of the end portion of the truck-frame as an integral structure reduces the 70 number of parts that enter into such a frame to a minimum, simplifies the construction as a whole, and greatly strengthens the truss-extension without adding to its weight.

Having thus described my invention, what 75 I claim as new, and desire to secure by Letters Patent, is—

1. In a car-truck, an integrally-formed end portion of the side frame comprising a yoke structure circular in ground plan and consist- 80 ing of a horizontal top portion and downwardly-extending hollow side portions, an attaching-flange at one side provided with a spring-socket and a truss extension at the other side, the horizontal portion of which is 85 duplex, combined with a removable socket at its end and a spring held in said socket, substantially as set forth.

2. In a car-truck, an end portion of the side frame comprising a yoke structure, an attach- 90 ing-flange at one side thereof provided with a seat or socket for a spring with a vertical perforation for a bolt passing through said seat or socket, and a two-part truss extension at the other side each part provided with a socket 95 for a spring and each socket perforated vertically for a bolt, the whole formed integrally, substantially as set forth.

3. In a car-truck, an end portion of the side frame comprising a yoke structure, an attach- 100 ing-flange at one side thereof and a truss extension at the other side the horizontal member of which is provided in the under surface of its outer end with a spring seat or socket, the whole formed integrally, substantially as 105 set forth.

4. In a car-truck, an end portion of the side frame comprising a yoke structure having 110 downwardly-extending vertically-perforated members, and side extensions for supporting springs, in combination with removable hard-metal bushings inserted in the upper ends of said perforations screws 37' and tie-bolts pass- 115 ing through said bushings, substantially as set forth.

5. In a car-truck, the combination with an end portion of the side frame comprising a yoke structure, the downwardly-extending 120 members whereof are perforated and provided with removable hard-metal bushings in their upper ends and screws 37' holding said bush- ings in place, of upper chord 14, lower horizontal beam 15, axle-box 12 and bolts 16 pass- 125 ing through said perforations and bushings of the yoke structure, and connected to said upper chord and lower beam, substantially as set forth.

6. The combination with an end portion of the side frame of a truck comprising a yoke structure and a laterally-extending end truss 130 consisting of horizontal member 20 and inclined member 21 provided respectively with

perforated spring-sockets as 28 and 31, of upper chord 14, lower beam 15, spiral spring 29, counter-spring 32 and tie-bolt 30, substantially as set forth.

5 7. The combination with an end portion of the side frame of a truck comprising a yoke structure and a laterally-extending end truss consisting of a horizontal member 20 and inclined member 21 and provided in the under
10 surface of its outer end with a spring-socket as 34, of upper chord 14, spiral spring 35, and

its spring-socket riveted to said member 20, counter-spring 36 and tie-bolt 30, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 8th day of June, A. D. 1895. 15

EDGAR PECKHAM.

Witnesses:

J. E. M. BOWEN,
M. C. PINCKNEY.