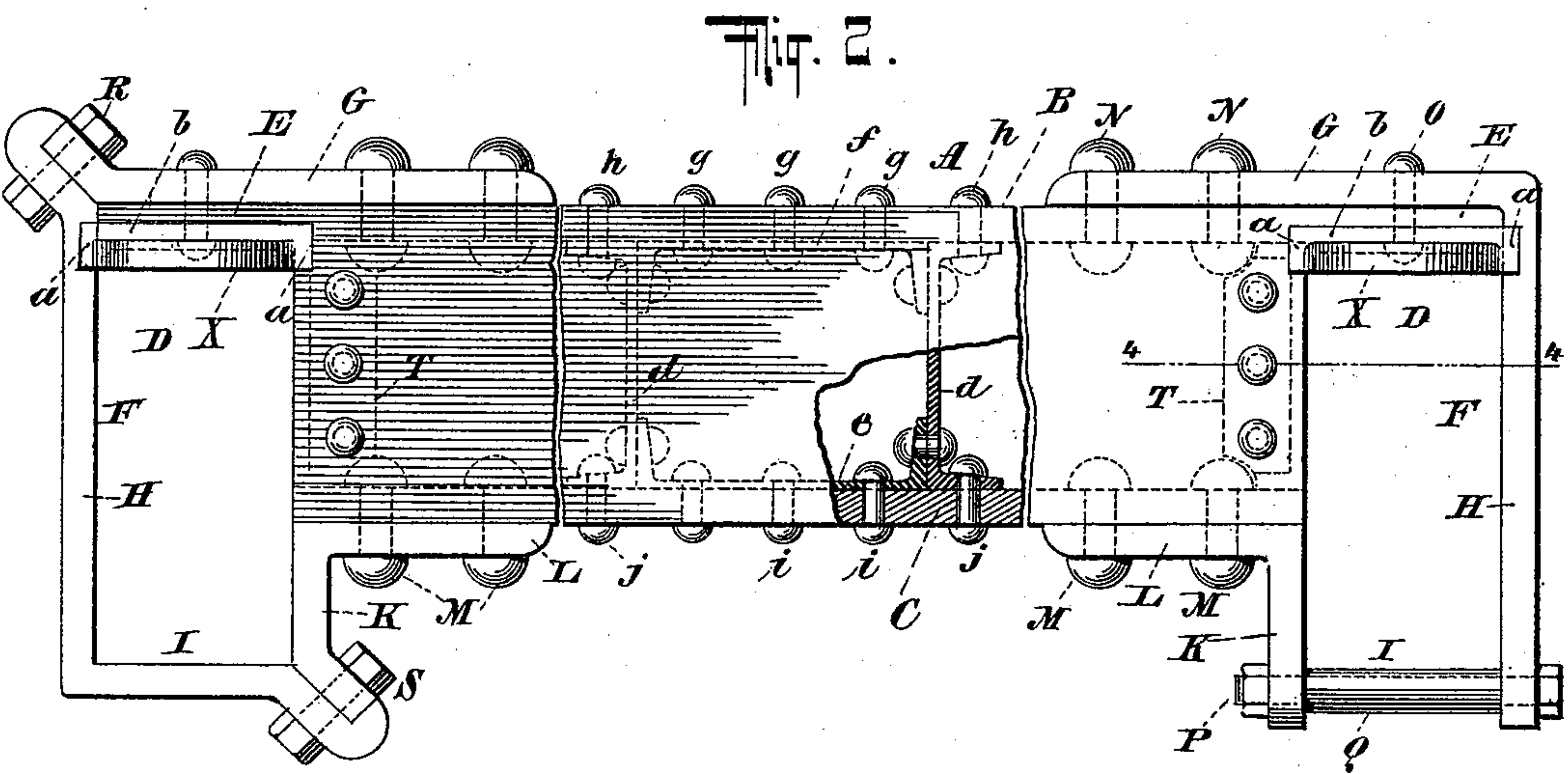
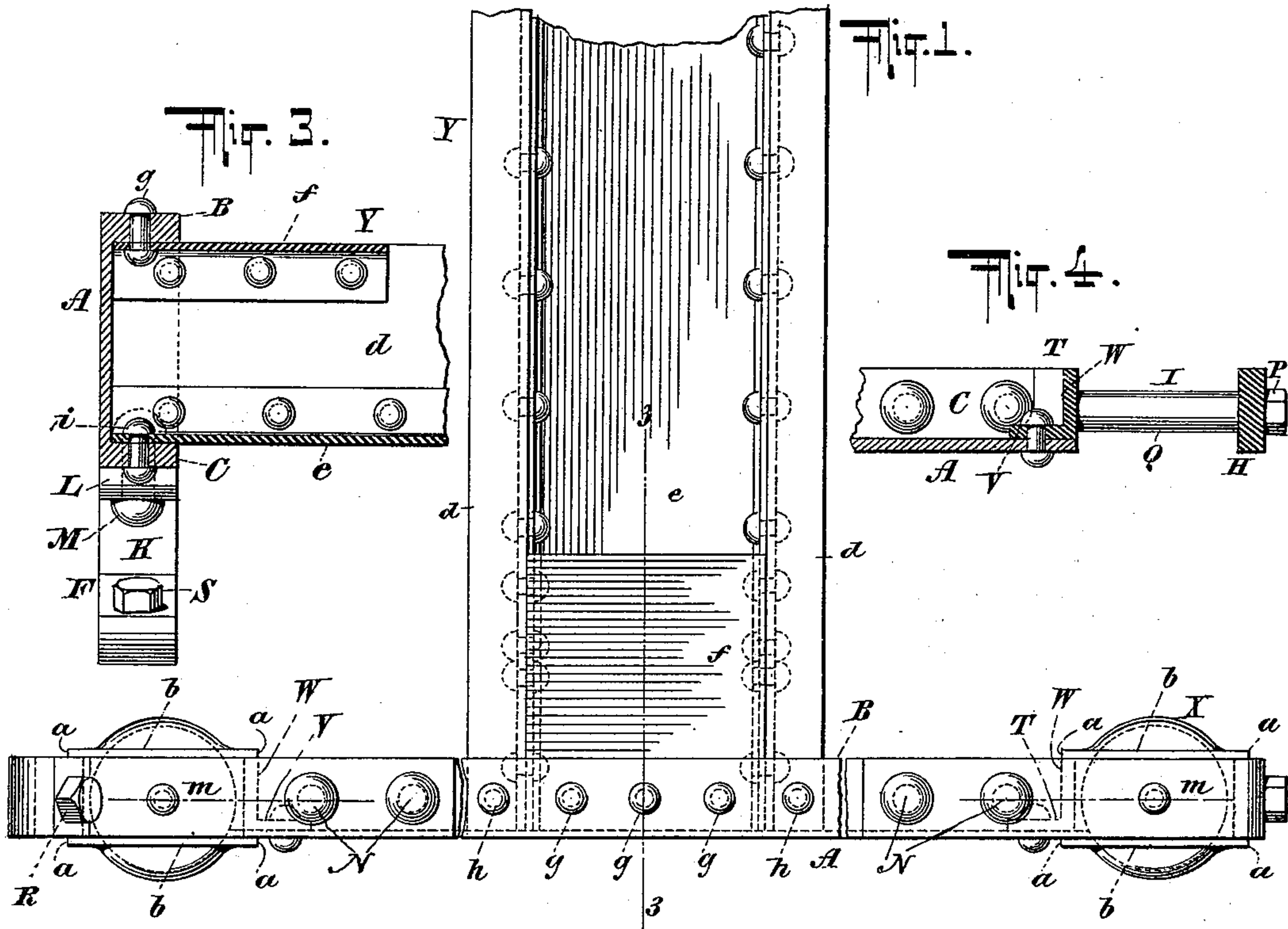


(No Model.)

B. W. TUCKER.
CAR TRUCK.

No. 583,613.

Patented June 1, 1897.



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CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 583,613, dated June 1, 1897.

Application filed February 27, 1897. Serial No. 625,328. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN W. TUCKER, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Car-Trucks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The invention relates to car-truck frames, and pertains particularly to the side frames or beams, the pedestal-frames at the ends of said side frames, and the transom connecting said side frames.

In accordance with the present invention the side frames or beams are formed with inwardly-turned upper and lower flanges, between which the ends of the transom are securely riveted, the ends of the transom abutting against the inner vertical surfaces of the webs of the side frames and having flanges which pass between the upper and lower flanges of the side frames to which they are riveted. The flange along the upper edge of the side frame projects over the pedestal-spaces, and the pedestal-frames are secured to the flanges at the upper and lower edges of the side frames, the upper member of the pedestal-frames passing over the projecting ends of the upper flange of the side frame, which, as above mentioned, extend across the top of the pedestal-spaces. The transom embraced in this application comprises two parallel channel-beams, an intermediate channel-beam horizontally disposed between and riveted to said parallel beams, and short channel-beam sections interposed between said parallel beams adjacent to their upper outer ends and riveted thereto and to the top flange of the side frames.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a top view, partly broken away, of a portion of a car-truck frame constructed in accordance with and embodying the in-

vention. Fig. 2 is a side elevation of same, partly broken away and partly in section, this figure illustrating two forms of pedestal-frames, either of which may be employed at will, one being a modification of the other. Fig. 3 is a vertical section through a portion of the truck-frame on the dotted line 3 3 of Fig. 1, and Fig. 4 is a transverse section on the dotted line 4 4 of Fig. 2.

In the drawings, A designates the side frame or beam, having at its upper and lower edges the inwardly-turned flanges lettered B C, respectively, said flanges being substantially greater in thickness than the web portion of the side frame and being of a width about equal to the width of the guiding-surfaces of the pedestal-frames. The upper flange B of the side frame A extends outward across the top of the pedestal-spaces D, the projecting ends of the flanges B being lettered E. The pedestal-frames F are secured to the ends of the side frame A, and they are of suitable dimensions to receive the usual axle boxes and springs in the customary manner. The pedestal-frames F comprise the upper horizontal member G, the outer vertical member H, the lower horizontal member I, and the inner vertical member K, which member is formed with the horizontal arm L, by which, by means of rivets M, it is secured to the lower flange C of the side frame A. The pedestal-frames F are thus of rectangular outline, and the upper member G rests directly upon the upper flange B of the side frame A, and is thereto secured by means of rivets or bolts N and the rivet or bolt O, the latter being centrally over the pedestal-spaces D and extending downward through the outwardly-projecting end E of said flange B. At the right-hand end of Fig. 2 the lower horizontal member I of the pedestal-frame is formed by a bolt P, passing through the sleeve Q, and the outer vertical member H and the upper horizontal member G of said frame are in an integral piece or bar of wrought metal, as shown. The present invention is not, however, limited to the formation of the members G H in an integral piece nor to the use of the bolt P and sleeve Q as constituting the lower member I of said frame, and hence at the left-hand end of Fig. 2 I illustrate a form of pedestal-frame

in which the upper horizontal member G and the outer vertical member H are in two pieces, detachably connected by the bolt R, and in which also the outer vertical member H and lower horizontal member I are in an integral piece, the inner end of the lower member I being connected with the vertical member K of said frame by means of the bolt S. The pedestal-frames shown in Fig. 2 are both of rectangular outline and are both secured to the flanges of the side frame A in the same manner. The side frames A are rolled beams, and the upper and lower flanges B C thereof are of substantial thickness and specially formed to receive the pedestal-frames and the ends of the transom. The outer projecting ends E of the upper flange B of the side frame A impart great strength and security to the pedestals and add to the efficiency of the truck-frame as a whole. The rivet or bolt O passes downward through the upper member G of the pedestal-frames and through the outwardly-projecting ends E of the upper flange B and binds said parts securely together. The ends of the web portions of the side frames A are in line with the rubbing-faces of the members K of the pedestal-frames; but since said web of the said frames is not equal in thickness to the width of the members of the pedestal-frame the auxiliary pedestal-piece T is secured through its flange V to the inner face of said web in order that the flange W of said auxiliary pedestal-piece may, with the thickness of the end of the said web, constitute a continuation of the inner side of the pedestal-frame partly formed by the member K of said frame. The auxiliary pedestal-piece T fills out the space at the ends of the side frame A between the upper and lower flanges B C of said frame and furnishes a suitable guiding-surface for the axle-boxes. At the upper end of each pedestal will be provided an integral inverted socket or receptacle X, which in use receives the upper end of the usual spring located above the axle-boxes, and said socket in the present instance will preferably be furnished with the end vertical gibs *a* and top horizontal gibs *b* to engage the adjoining surfaces of the pedestal-frame. The central portion of the sockets X will preferably be recessed or cut away to accommodate the head of the bolt or rivet O, as indicated.

The transom (lettered Y) comprises the transverse parallel channel-beams *d d*, the intermediate horizontally-disposed channel-beam *e*, which is riveted along its edge flanges to the web portion of the said parallel beams, and the short channel-beam sections *f*, one being at each end of the transom and having its flanges turned downward and riveted to the web portion of the parallel beams *d*, while the web-surfaces of said beam-sections *f* are about on a horizontal plane with the upper edges of the beams *d* and pass below the upper flange B of the side frame, to which they are secured by rivets *g*. The transom at its

ends fits between the lower and upper frames B C of the side frames and abuts against the vertical inner face of the web portion of said side frames, and said transom is secured at its ends to the side frames by rivets *g*, above referred to, which pass through the flange B and beam-sections *f*, rivets *h*, which pass through the upper flange B, and the upper horizontal flanges of the parallel beams *d*, rivets *i*, which pass through the web portion of the intermediate channel-beam *e* and the lower flange C of said side frames, and the rivets *j*, which pass through the lower horizontal flanges of the parallel beams *d* and the lower flange C of the side frame. Thus the transom is secured by vertical rivets or bolts which pass through the flanges B C of the side frame, which flanges are of substantial thickness and fully able to receive said transom. The intermediate beam *e* of the transom extends along the lower edges of the parallel beams *d* and has its lower plain surface about on the same horizontal plane with the lower edges of said parallel beams, while its flanges turn upward and, as above mentioned, are riveted to the web portion of said parallel beams. It will be observed that the ends of the transom are of rectangular box-like form and are of great strength, rigidity, and durability. The box-like ends of the transom at their outer extremities snugly fit between the flanges B C and are securely riveted thereto, as above explained.

In the construction of truck above described the outer ends of the transom extend outward beyond the central vertical line through the rubbing-surfaces for the axle-boxes, as indicated in Fig. 1, said central line being represented by the dotted line *m*.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a car-truck frame the side frames having the inwardly-turned upper and lower flanges, combined with the flanged beams whose end portions are between and riveted to said upper and lower flanges; substantially as set forth.

2. In a car-truck frame, the side frames having the inwardly-turned upper and lower flanges which are greater in thickness than the web portion of said frames and are in alignment with the pedestal-frames, combined with the transom comprising parallel beams secured at their ends between said flanges; substantially as set forth.

3. In a car-truck frame, the side frames having the inwardly-turned flanges, and pedestal-frames at the ends of the side frames, combined with the transom comprising the parallel flanged beams connecting said side frames, the intermediate horizontally-disposed flanged beam connecting said parallel beams, and the beams between the upper outer ends of said parallel beams and secured thereto; substantially as set forth.

4. In a car-truck, the side frames, and pedestal-frames at the ends of said side frames,

combined with the transom comprising the parallel flanged beams, the intermediate horizontal channel-beam whose flanges are riveted to the lower portion of said parallel beams, and the flanged beams between and riveted to the upper portion of the ends of said parallel beams; substantially as set forth.

5. In a car-truck, the side frames, having inwardly-turned flanges and pedestal-frames at the ends of said side frames, combined with the transom comprising the parallel flanged beams secured at their ends between said inwardly-turned flanges, the intermediate channel-beam secured at its flanges to said parallel beams and at its web ends to the lower flange of the side frames, and the channel-beams at the upper outer ends of said parallel beams and at their edge flanges secured thereto and at their web ends secured to the upper flanges of said side beams; substantially as set forth.

6. In a car-truck frame, the side frames having the inwardly-turned flanges, and pedestal-frames at the ends of said side frames, combined with a beam-transom connecting said side frames and having its ends secured between said flanges; substantially as set forth.

7. In a car-truck frame, the parallel beam side frames having inwardly-turned upper and lower flanges, and pedestals at the ends of said side frames, combined with the transom connecting said side frames, said transom comprising parallel flanged beams cut off square at their ends to bring said ends against the webs of the side frames and their flanges between the flanges of the side frames to which they are secured; substantially as set forth.

8. In a car-truck frame, the side frames having the upper edge flange, said flange being continued beyond the ends of the webs of said side frames to extend across the pedestal-spaces, combined with pedestal-frames at the ends of said side frames, the upper member of said pedestal-frames being extended along the top of said top flange and secured thereto; substantially as set forth.

9. In a car-truck frame, the side frames having the upper and lower edge flanges, the upper flange being continued beyond the ends of the webs of said side frames to extend across the pedestal-spaces, combined with the pedestal-frames at the ends of the side frames and secured to said upper and lower flanges, the upper member of said pedestal-frames extending along the top of the said upper flange; substantially as set forth.

10. In a car-truck frame, the side frames having the upper and lower flanges at one side thereof, combined with pedestal-frames at the ends of said side frames and in aline-

ment with said flanges; substantially as set forth.

11. In a car-truck frame, the side frames having the upper and lower inwardly-turned flanges, said flanges being of greater thickness than the web portion of the side frames, combined with pedestal-frames at the ends of said side frames and secured to and being in alinement with said flanges; substantially as set forth.

12. In a car-truck frame, the connected side frames having upper and lower inwardly-turned flanges at the inner side thereof, combined with pedestal-frames at the ends of said side frames, the guiding-surfaces of said pedestal-frames having their central vertical line inward beyond the inner vertical surface of the web of said side frames; substantially as set forth.

13. In a car-truck, the side frames having the vertical web and the flanges at the upper and lower edges thereof, said flanges being at the inner side only of the said web and substantially greater in thickness than said web, the upper flange extending centrally across the top of the pedestal-spaces, combined with pedestal-frames at the ends of said side frames and in alinement with said upper and lower flanges, whereby the longitudinal central vertical line through the rubbing-surfaces of said pedestal-frames is inward beyond the inner vertical plane of said web; substantially as set forth.

14. In a car-truck, the side frames having the vertical web and the flanges at the upper and lower edges thereof, said flanges being at the inner side only of the said web and substantially greater in thickness than said web, combined with pedestal-frames at the ends of said side frames and in alinement with said upper and lower flanges, whereby the longitudinal central vertical line through the rubbing-surfaces of said pedestal-frames is inward beyond the inner vertical plane of said web; substantially as set forth.

15. In a car-truck, the side frames having a smooth exterior surface and inwardly-turned upper and lower flanges at its edges, combined with a transom connecting said sides and having its ends housed between said flanges, and pedestal-frames at the ends of said side frames and in central alinement with said flanges; substantially as set forth.

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

BENJAMIN W. TUCKER.

Witnesses:

CHARLES C. GILL,
E. JAS. BELKNAP.