

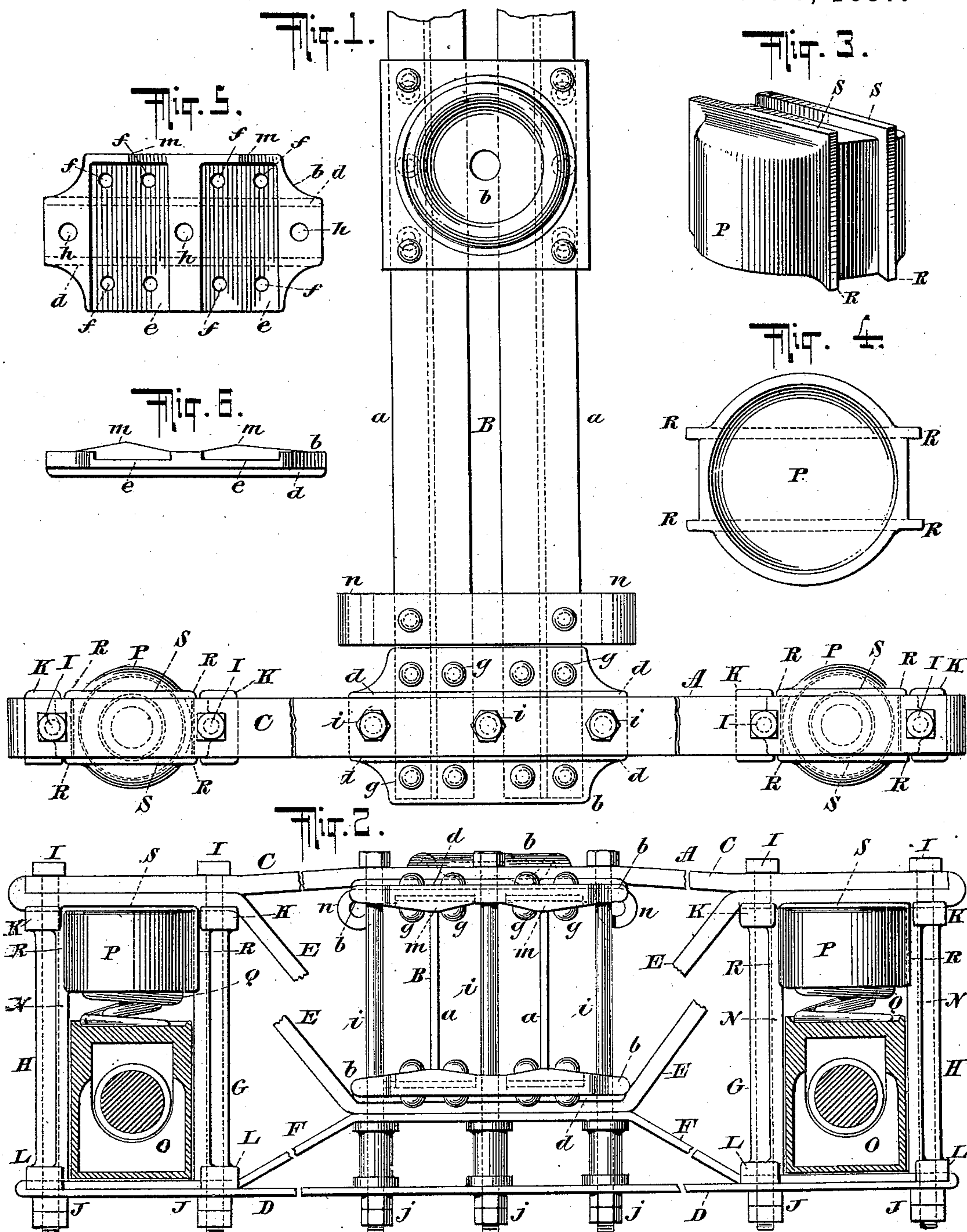
(No Model.)

2 Sheets—Sheet 1.

B. W. TUCKER.  
CAR TRUCK.

**No. 578,587.**

Patented Mar. 9, 1897.



**WITNESSES:**

WITNESSES:  
Gustave Dietrich.  
John Schlenker.

INVENTOR

Benjamin H. Tucker, <sup>INVENTOR</sup>

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Chas. C. Gill  
ATTORNEY.

**ATTORNEY**

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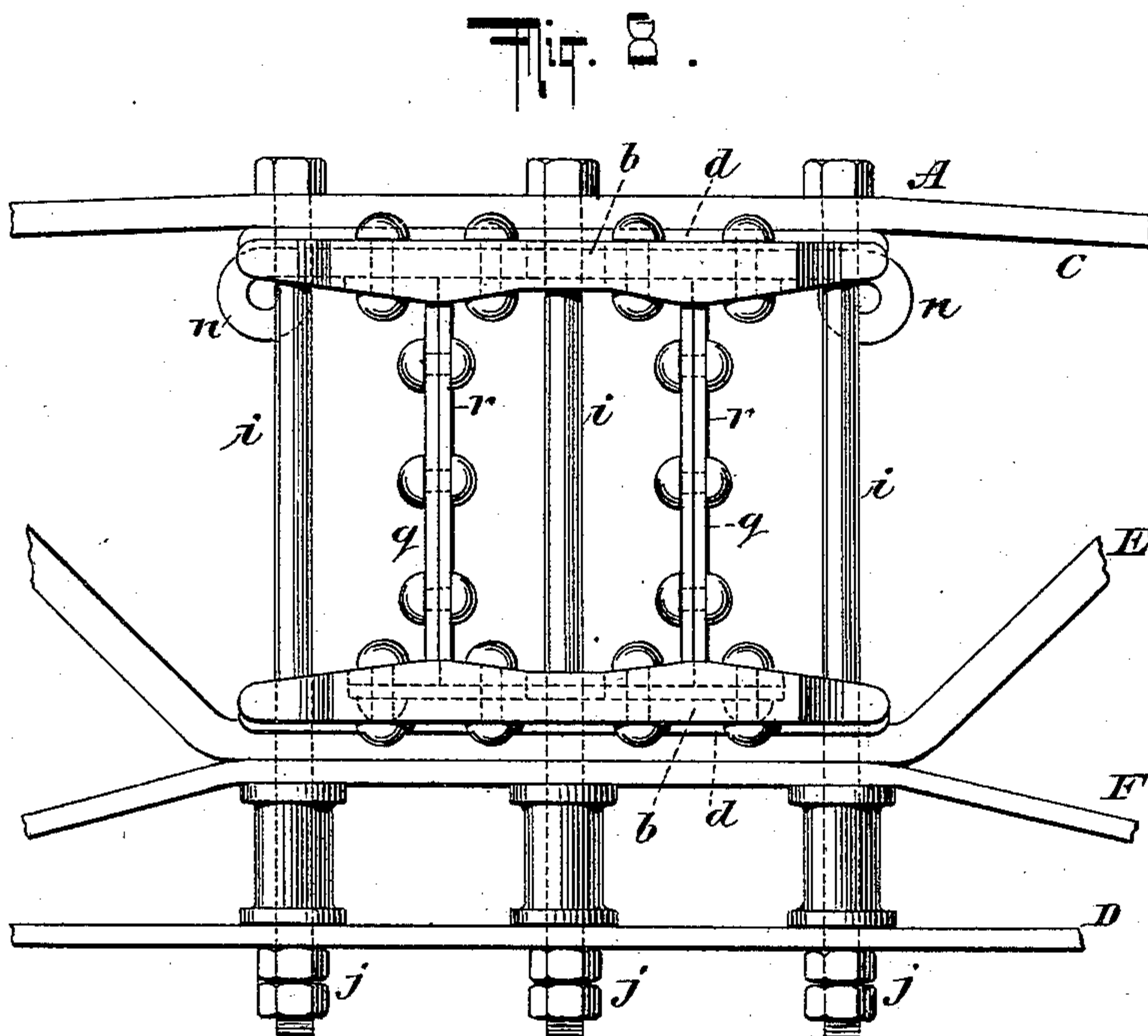
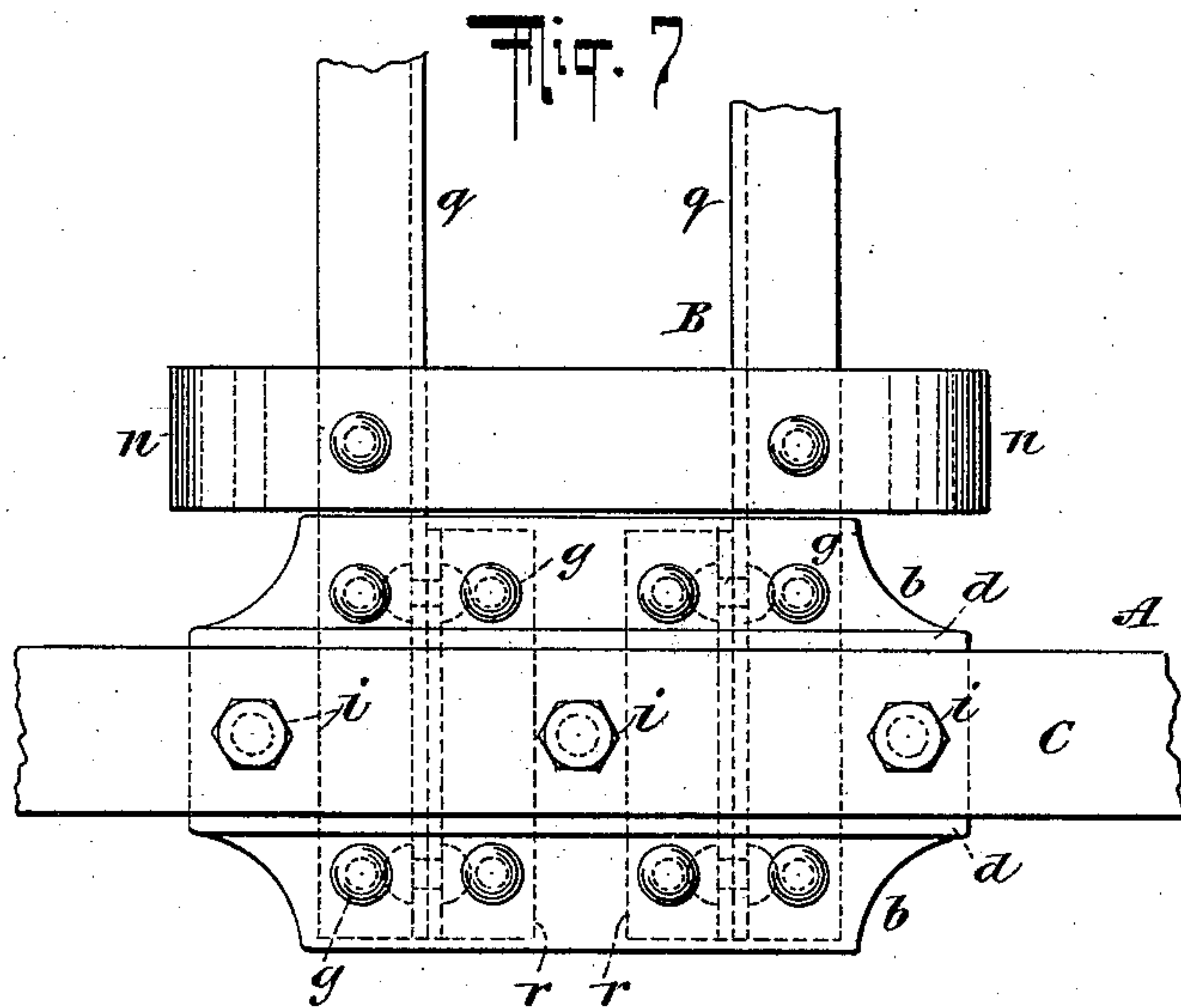
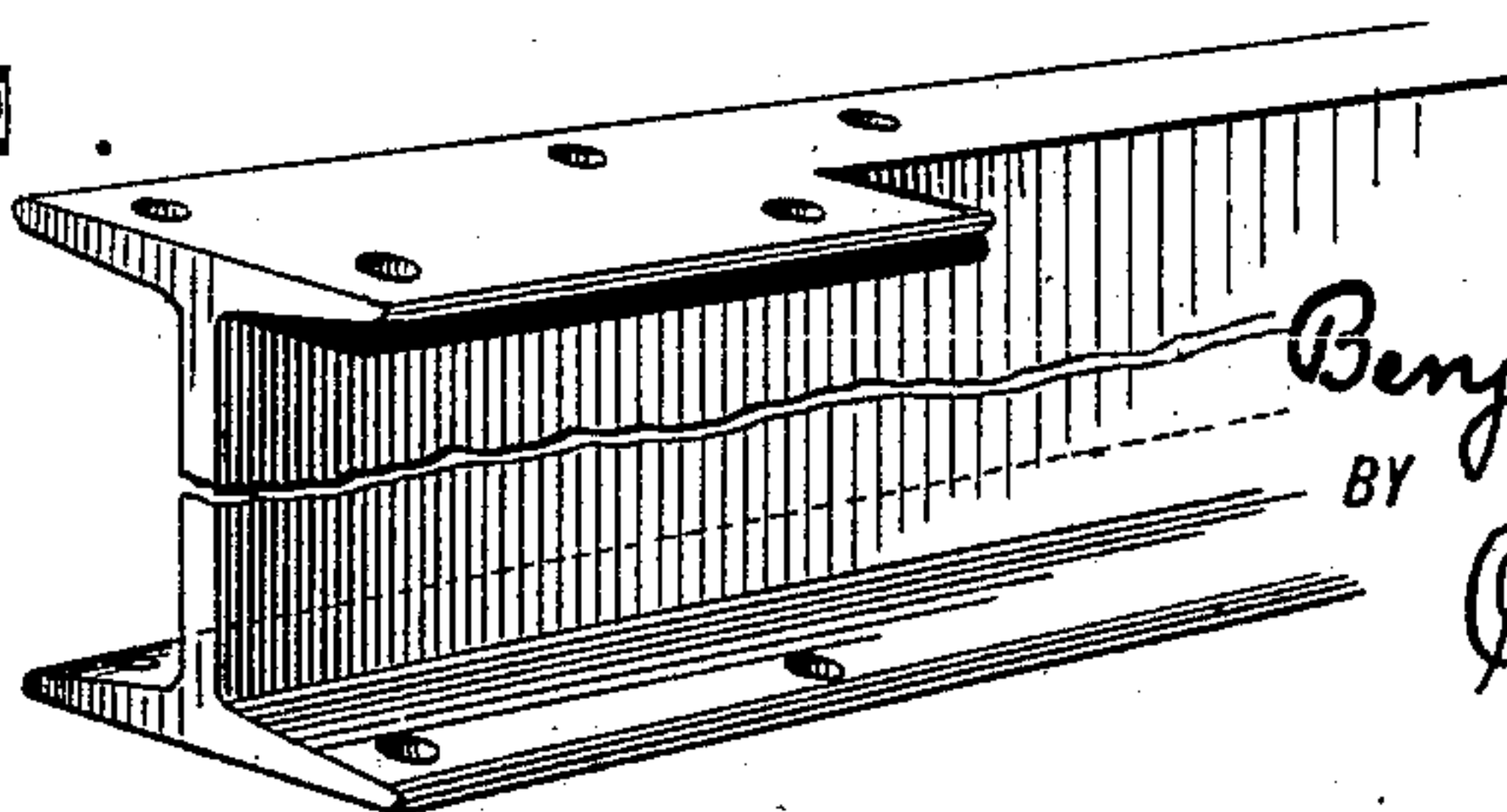


Fig. 9

WITNESSES:

Gustave Dietrich.  
John Kehlenbeck.



INVENTOR

Benjamin W. Tucker,  
BY  
Chas. C. Gill  
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# UNITED STATES PATENT OFFICE.

BENJAMIN W. TUCKER, OF NEWARK, NEW JERSEY, ASSIGNOR TO EDWARD CLIFF, OF SAME PLACE.

## CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 578,587, dated March 9, 1897.

Application filed January 5, 1897. Serial No. 618,007. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN W. TUCKER, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Car-Trucks, of which the following is a specification.

The invention relates to improvements in car-trucks, and comprises, first, a novel transom adapted to be applied to the well-known type of diamond truck-frame, and, second, in certain novel features of construction pertaining to the pedestal-frames, within which are arranged the usual axle-boxes and spring-sockets of novel form.

The object of the invention is to improve the structure of the pedestals for diamond truck-frames and to produce a transom which will in all cases afford the proper strength and rigidity and be capable of ready and secure attachment to the diamond truck side frames.

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

Figure 1 is a top view, partly broken away, of a car-truck frame constructed in accordance with and embodying the invention. Fig. 2 is an end view, partly in section and partly broken away, of same. Fig. 3 is a detached perspective view of one of the spring-sockets arranged over the axle-boxes. Fig. 4 is a bottom view of same. Fig. 5 is a bottom view of the upper plate, connecting the ends of the beams forming the transom. Fig. 6 is an edge view of same. Fig. 7 is a top view of a portion of a car-truck and illustrating a slightly-modified form of transom, this figure showing channel-beams instead of I-beams, as illustrated in Fig. 1. Fig. 8 is a side view of same, and Fig. 9 is a perspective view of a further modified form of beams which may be employed for the transom.

In the drawings, A designates the side frame of the truck, one side only being shown, since the sides are duplicates of one another, and B the transom, which extends transversely across the truck and connects the opposite sides of the latter. The side A is of the well-known diamond type and comprises the up-

per and lower bars (lettered C D, respectively) and the inner bars, (lettered E F, respectively.) At the ends of the side A are the pedestals formed of the vertical bars G H, which are secured between the bars E D by means of the vertical bolts I, which extend downward through said bars G H and receive upon their lower ends the securing-nuts J. The bars G H have upon their upper and lower ends the heads K L, which are grooved to fit upon the upper bar E and lower bar F of the truck-frame, as indicated by the dotted lines in Fig. 2. The grooves or recesses formed in the heads K L of the pedestal-bars G H prevent any twisting of said bars G H and enable them upon the application of the bolts I to become rigidly secured and withstand all of the strain which may be exerted against them during the use of the car.

Upon the facing sides of the vertical pedestal-bars G H are formed the rubbing and guiding flanges N, which receive between their lower portions the axle-boxes O and between their upper portions the socket P for the coiled spring Q, whose upper portion is confined within said socket P and whose lower portion is seated upon the upper end of the axle-box O. The socket P for the spring Q is provided upon its opposite sides with the vertical flanges R, which embrace the opposite vertical edges of the rubbing and guiding flanges N, and said socket P is upon its upper end formed with the gibs or flanges S, which embrace the opposite edges of that portion of the bar E closing the top of the pedestal-spaces. It will be apparent that when the socket P is in position, as shown in Fig. 2, it will remain stationary and be prevented from any twisting movement during the employment of the car. The pedestal-frame inclosing the axle-box and spring-socket is entirely durable, reliable, and convenient of use.

The transom forming a part of my invention is shown applied to the side frame A; but it will be constructed to completion before its application to the side frames. The transom illustrated in Figs. 1 and 2 is composed of the I-beams *a a*, which at their center are connected by a center bearing-plate *b* and at their ends are connected by the upper and lower plates *b b*, which preferably will corre-



spond with one another, so that either may be used as the top plate or bottom plate. The beams *a a* extend at their ends outward beyond the sides A of the truck-frame, and the plates *b b* are substantially central with the bars A E of the side frame and are provided with the gibs or flanges *d d* to embrace the opposite edges of the bar A and bar E. The plates *b* are elongated in outline and not only extend inward and outward laterally beyond the side A, as shown in Fig. 1, but extend longitudinally beyond the beams *a a*, and said plates *b* are formed with the recesses *e e* to fit upon the beams *a a*, and with the apertures *f* to receive the rivets *g*, by which said plates are rigidly secured to the beams *a a* and made to permanently connect the latter. The plates *e* are also formed with the apertures *h* to receive the vertical bolts *i i i*, which pass through all of the longitudinal bars of the side A, and are provided with the securing-nuts *j* at their lower ends. The bolts *i*, as clearly shown in Fig. 2, pass through both of the plates *b* and rigidly connect the transom B to the side A. At the outer edges of the plates *b* are formed the vertical flanges *m*, which, when the plates *b* are passed home upon the beams *a a*, will abut against the ends of said beams, as indicated by the dotted lines in Fig. 1. Upon the transom B may be riveted the usual hangers *n n* for the inside-hung brakes, (not shown,) and said beams *a a* may at the center of their lower side be connected by any suitable bottom plate riveted thereto, as indicated by the dotted lines in Fig. 1.

The transom will, as above described, be constructed to completion before being applied to the side A, and will consist, essentially, of the beams *a a* and the plates *b b* applied to their ends and rigidly connecting said beams ready for application to the sides A.

It is not desired to limit the invention to the use of the technical I shape for the beams *a a*, and hence in Fig. 7 I illustrate that channel-beams may be substituted for the I-beams of Fig. 1. In the employment of the channel-beams lettered *q q* in Fig. 7 I will make use of the short channel-beam sections *r r*, (see Fig. 8,) which will be riveted to the vertical web of the channel-beams and with the latter form at the ends of the transom the I-beam shape shown in Fig. 1. The short channel-beam sections *r* will, with the main portion of the channel-beams *q q* at their ends, enter the recesses *e* of the upper and lower plates *b b*, as shown by dotted lines in Fig. 7, and the plates *b b* will be securely riveted thereto in the manner above described with respect to the construction shown in Fig. 1.

The modification illustrated in Figs. 7 and 8 consists simply in using channel-beams instead of I-beams for the transom without changing the plates *b b* or the manner of connecting said beams and securing the transom to the sides A of the truck.

In Fig. 9 I illustrate a further modified

form of beam which may be used for the transom, and this form of beam is substantially an I-frame having its upper flange at the inner side of the beam and beyond the top plate *b* sheared off, as shown in Fig. 9. Thus the beam illustrated in Fig. 9 is simply one of the beams *a* shown in Fig. 1 with its upper flange at its inner side removed between the top plate *b* at one end of the transom and the top plate *b* at the opposite end of the transom. I have thus illustrated three forms of rolled beams which may be employed in the construction of the transom forming a part of my present invention in order to demonstrate that the invention is capable of modifications and that I include all these and analogous modifications within the scope of my invention as claimed.

In instances in which the circumstances will admit of the same the bolts *i* may pass downward directly through the plates *b* and also through the flanges of the transom-beams.

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

1. In a car-truck the vertical pedestal-bars G, H, having the guiding and rubbing flanges N and provided with apertures to receive the bolts I, combined with the axle-box, the spring seated therein and the inverted socket having upon its opposite edges the flanges to engage the flanges N; substantially as set forth.

2. In a car-truck frame the upper and lower bars C, E, and D, F, respectively, combined with the vertical pedestal-bars interposed between said upper and lower bars and having at their ends the recesses to receive the edges of the bars E, F, the bolts passing through said upper and lower bars and said pedestal-bars, the axle-boxes held between said pedestal-bars, the springs above said boxes and the spring-sockets held between the upper portions of said pedestal-bars and provided with the flanges R, S, to engage said pedestal-bars and said bar E; substantially as set forth.

3. In a car-truck, the sides and the transom composed of the transverse beams, the upper and lower plates riveted to the ends of said beams and extending inward and outward laterally beyond the vertical plane of the sides and longitudinally beyond the transom-beams, combined with bolts passing through said plates and through the sides; substantially as set forth.

4. In a car-truck, the sides, and the transom connecting the same and composed of the transverse beams and the upper and lower plates riveted to the ends of said beams and having the longitudinal gibs or flanges to engage the bars of said sides, combined with vertical bolts passing through said plates and said sides; substantially as set forth.

5. In a car-truck, the sides, and the transom connecting the same and composed of the transverse beams and the upper and lower



plates riveted to the ends of said beams and recessed at their inner side to receive said ends, combined with vertical bolts passing through said plates and said sides; substantially as set forth.

5 6. In a car-truck, the sides, and the transom connecting the same and composed of the transverse beams and the upper and lower plates riveted to the ends of said beams, said  
10 plates having at their inner sides the recesses to receive said ends and at their outer sides the longitudinal gibs or flanges to engage the bars of said sides, combined with bolts passing through said plates and said sides; sub-  
15 stantially as set forth.

7. In a car-truck, the sides, and the transom connecting and bolted to the same and extending outward beyond the vertical plane of said sides, said transom being composed  
20 of the transverse beams and the horizontal plates extending entirely across and connecting the ends of said beams and being riveted thereto; substantially as set forth.

8. In a car-truck, the sides, and the tran-

som connecting and bolted to the same and  
25 extending outward beyond the vertical plane of said sides, said transom being composed of the transverse flanged beams and the plates extending across and connecting the ends of  
30 said beams and riveted thereto beyond the outer and inner vertical planes of said sides; substantially as set forth.

9. For a car-truck, the transom composed of the parallel rolled flanged beams, the upper and lower plates secured to and connect-  
35 ing the ends of said beams and adapted to be secured within the sides of the truck-frame, the center-bearing connecting said beams at their center, and the brake-hangers connect-  
40 ing said beams adjacent to their ends; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 2d day of January, A. D. 1897.

BENJAMIN W. TUCKER.

Witnesses:

CHARLES C. GILL,  
E. JOS. BELKNAP.