

No. 715,711.

B. W. TUCKER.
CAR TRUCK.

Patented Dec. 9, 1902.

(Application filed July 23, 1902.)

(No Model.)

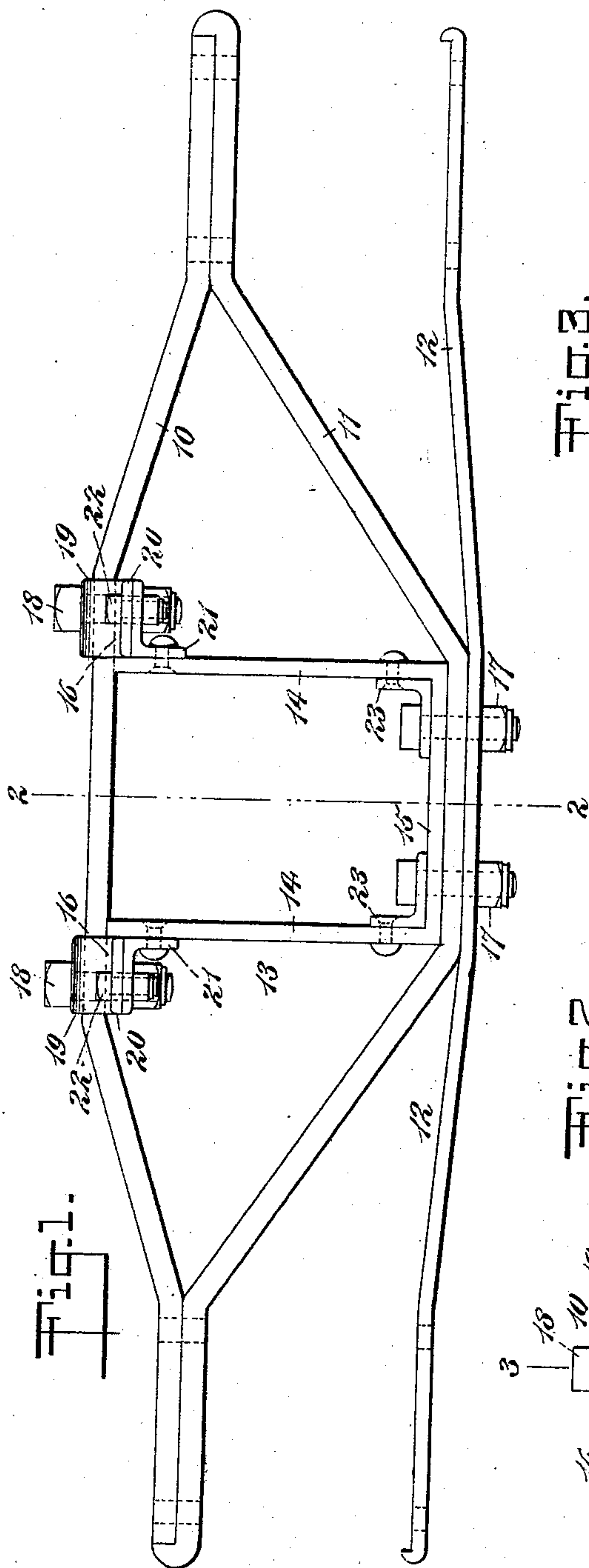


Fig. 1.

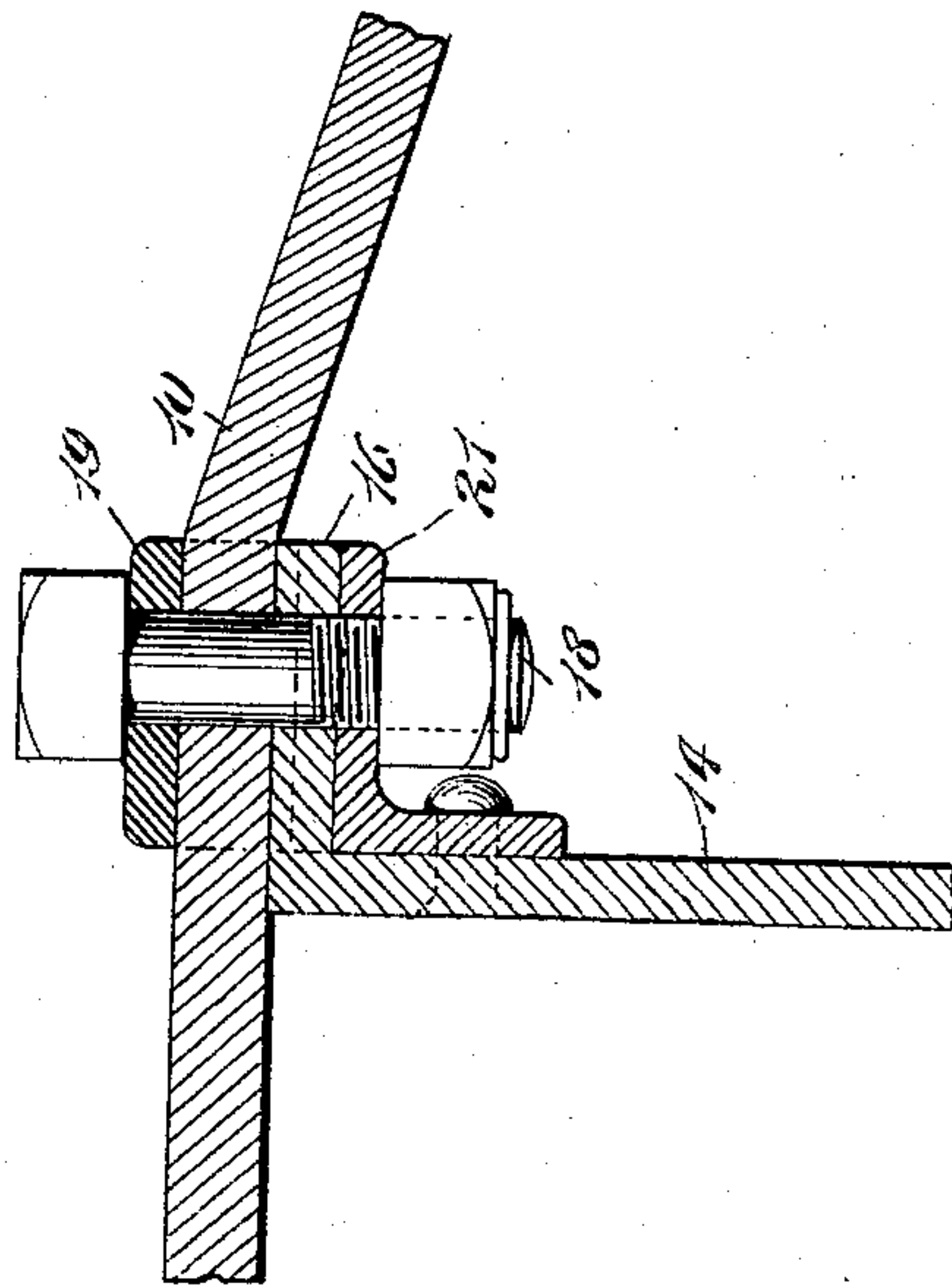
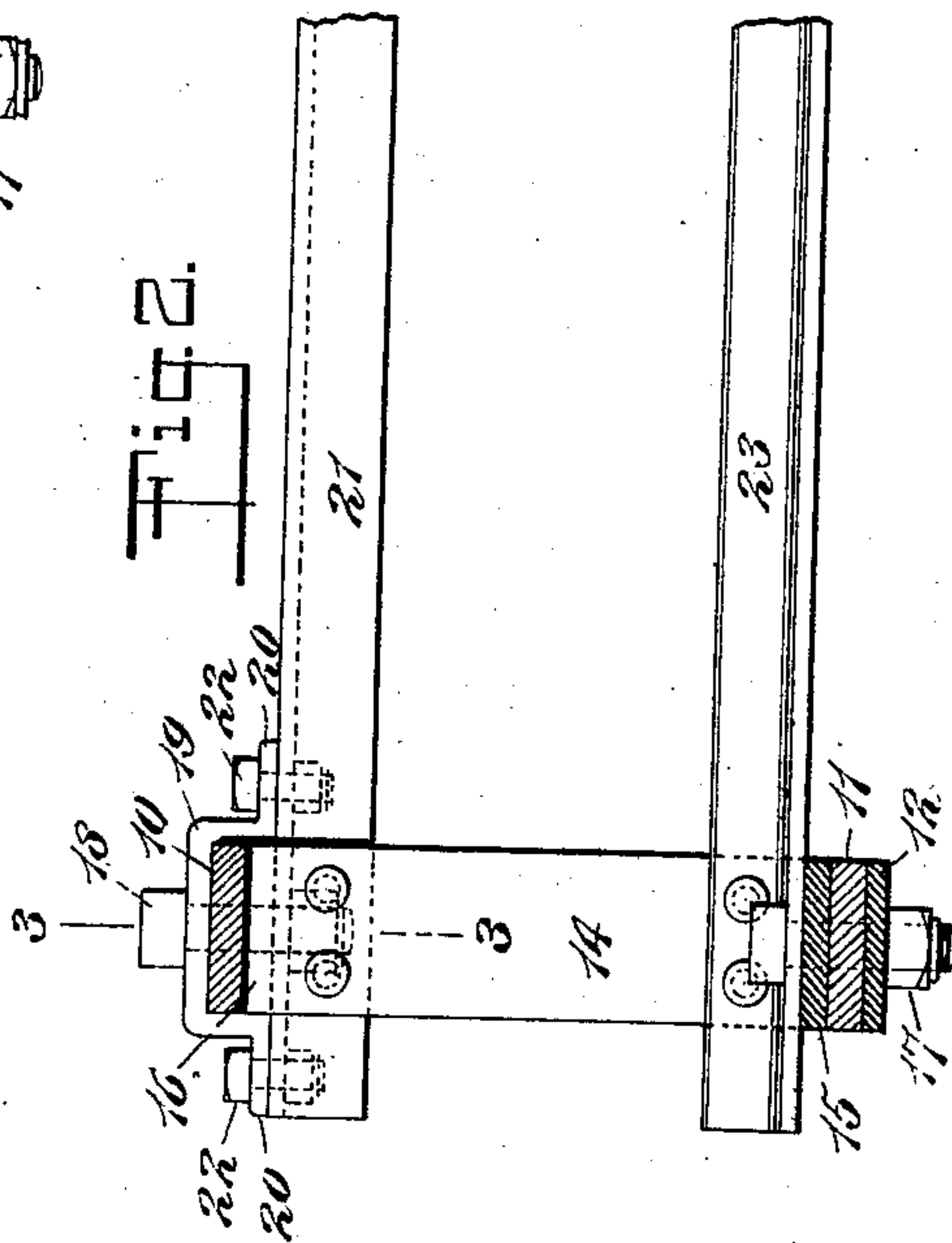


Fig. 2.



WITNESSES:

Arthur Marion.
Anna C. Broderick.

INVENTOR

Benjamin W. Tucker.

BY

Chas. O. Gill

ATTORNEY

UNITED STATES PATENT OFFICE.

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

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 715,711, dated December 9, 1902.

Application filed July 23, 1902. Serial No. 116,632. (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 particularly to improvements in freight-car trucks of the diamond pattern; and my invention consists in the novel features and combinations of parts hereinafter described, and pointed out in the claims.

The object of the invention is to render more rigid and durable the side frames of the truck, particularly at their central portions, and to so construct and connect said side frames that the squareness of the truck may be preserved and yet that the truck may possess the capability of such elasticity or torsional action in its transoms as to enable the wheels to remain on the track-rails notwithstanding the usual curvatures and irregularities in the latter.

The invention and satisfactory means for carrying the same into effect may be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a diamond truck embodying my invention, the wheels and pedestal-frames for the axle-boxes being omitted because they form no part of the present invention. Fig. 2 is a vertical transverse section, partly broken away, of same on the dotted line 2 2 of Fig. 1; and Fig. 3 is a vertical longitudinal section of a portion of same on the dotted line 3 3 of Fig. 2.

In the drawings, 10 designates the upper arch-bar, 11 the lower arch-bar, and 12 the tie-bar of the side frames of the truck, said side frames being duplicates of each other.

Intermediate the central portion of the upper and lower bars of each side frame is secured an open frame 13, comprising the vertical parallel bar members 14 14, the lower horizontal bar member 15 extending inwardly from said lower ends of said vertical members, and the upper horizontal bar members 16 16 extending outwardly from the upper ends of said vertical members 14 14, said

frame 13 being preferably in one integral piece of wrought metal and defining a suitable rectangular space for the ends of the bolster and their springs or other supports. (Not shown.) The lower member 15 of the frame 13 is secured by bolts 17, passing through said member 15 and also through the lower arch-bar and tie-bar and being adjacent to the lower ends of the vertical bar members 14, and the upper members 16 are secured below the upper arch-bar by means of bolts 18, which pass through said upper arch-bar and said members 16, and by preference the said members 16 are further secured by means of the box-straps 19, which fit transversely over the upper arch-bars and upon the vertical side edges of said members 16, and thence, by means of the end flanges 20, engage the upper surface of the upper transom-beams 21, to which said flanges 20 are secured by means of bolts 22, disposed at the outer and inner sides of the side frame. The bolts 18 also pass through the box-straps 19 and aid in securing said straps, and also through the upper flanges of the upper transom-beams 21 and aid in securing said beams to the side frames.

The upper and lower transom-beams 21 23, respectively connecting the side frames of the truck, are angle-iron beams, as shown, and the upper beams 21 have their vertical flanges secured to the outer faces of the vertical bar members 14 and their horizontal flanges extending outwardly toward the ends of the truck and directly below the horizontal bar members 16 and box-straps 19, to which they are firmly secured by means of the bolts 18 and 22.

The lower angle-iron transom-beams 23 fit into the lower inner corners of the frames 13, the vertical flanges of said beams being secured to the inner faces of the vertical bar members 14 and the horizontal members of said beams engaging the upper surface of the lower bar member 15 and being secured by the bolts 17.

The bolts 17 and 18 are at opposite sides of the vertical bar members 14, and the horizontal flanges of the upper transom-beams 21 extend outwardly from said members 14, while the horizontal flanges of the lower tran-

som-beams 23 extend inwardly from the inner faces of said members 14, the said horizontal flanges of said upper and lower beams thus not being in vertical alinement with each other and projecting in opposite directions from each other. The frame 13 is of very durable character and having the upper outwardly-extending members 16, and the inwardly-extending lower member 15 engages substantial surfaces of the upper and lower arch-bars and affords without regard to the special transom-beams employed great strength and security to the side frame. The box- straps 19 aid in imparting strength and security to the side frame and in effecting the rigid connection of the ends of the transoms to the side frames.

The transoms of the character shown and described are of simple construction and while very firmly connecting the side frames are capable of a sufficient twisting or torsional action to enable the truck-wheels to firmly remain on the track-rails notwithstanding the usual curves and irregularities in the latter.

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

1. In a car-truck, the side frames comprising upper and lower bars, and the central frame 13 intermediate said bars and comprising the vertical bar members 14, outwardly-extending upper members and inwardly-extending lower member, combined with the angle-iron transom-beams 21 secured to said members 14, the box-straps extending over the upper bar of the side frame, said upper members and said transoms, the bolts 18 securing said upper bar, upper members and transoms, the bolts securing the ends of said

box-straps to said transoms, and means for securing the lower end of said frame 13; substantially as set forth.

2. In a car-truck, the side frames comprising upper and lower bars, and the central frame 13 intermediate said bars and comprising the vertical bar members 14, outwardly-extending upper members and inwardly-extending lower member, combined with the angle-iron upper transom-beams 21 secured to said bar members 14 at the outer sides of their upper ends and also to the upper bar of the side frame, and the angle-iron lower transom-beams 23 secured in the inner lower corners of said frame 13; substantially as set forth.

3. In a car-truck, the side frames comprising upper and lower bars, the vertical bars 14 intermediate said upper and lower bars and at opposite sides of the center of the side frame, means at the outer sides of the upper ends of said bars 14 for securing the latter to the side frame, and means at the inner sides of the lower ends of said bars 14 for securing the latter to the side frame, combined with upper and lower transom-beams connecting said side frames, the upper transom-beams being at the outer sides of the upper ends of said bars 14 and the lower transom-beams being at the inner side of the lower end of said bars 14; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 18th day of July, A. D. 1902.

BENJAMIN W. TUCKER.

Witnesses:

CHAS. C. GILL,
ARTHUR MARION.