(No Model.)

# G. R. JOUGHINS.

## RAILWAY CAR TRUCK FRAME.

No. 588,580. Patented Aug. 24, 1897.

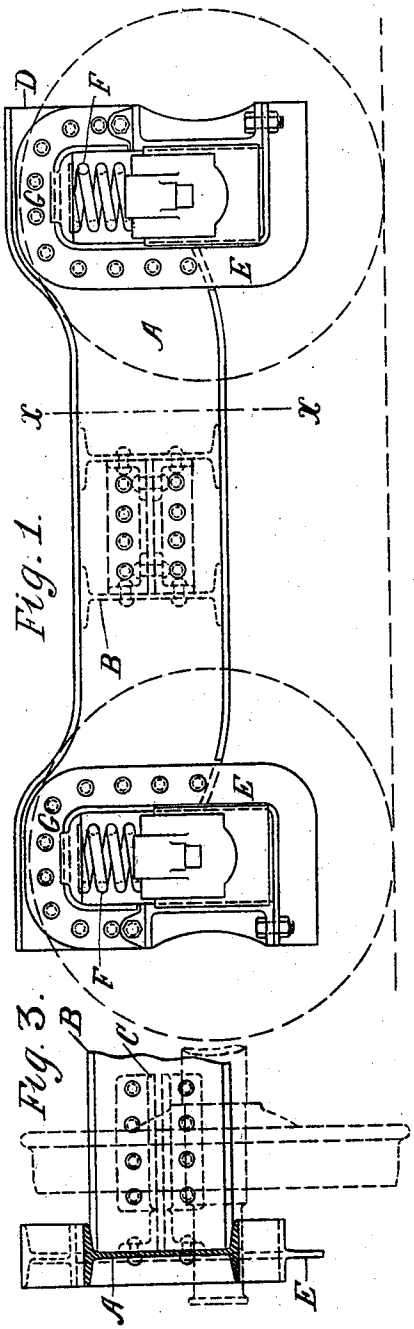



Fig. 1.

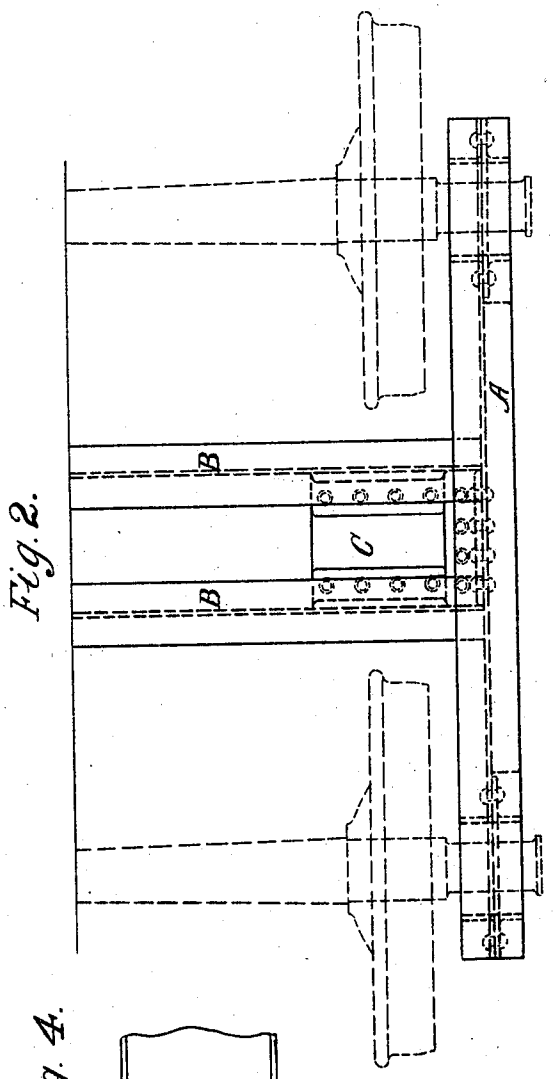



Fig. 2.




Fig. 3.

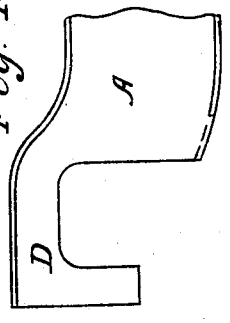



Fig. 4.

WITNESSES:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

GEORGE ROBERT JOUGHINS, OF BERKLEY, VIRGINIA, ASSIGNOR OF ONE-HALF TO EDWARD CLIFF, OF NEWARK, NEW JERSEY.

## RAILWAY-CAR-TRUCK FRAME.

SPECIFICATION forming part of Letters Patent No. 588,580, dated August 24, 1897.

Application filed April 5, 1895. Serial No. 544,602. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE ROBERT JOUGHINS, residing at Berkley, in the county of Norfolk, State of Virginia, have invented a new and useful Improvement in Railway-Car Trucks, of which the following is a specification.

My invention relates to improvements in metal railway-car-truck frames; and the objects of my improvement are, first, to construct a strong, durable, and cheap frame; second, to form a jaw or pedestal for the reception of the journal-box in a novel and effective manner. I attain these objects by constructing truck-frames as shown in the accompanying drawings, in which—

Figure 1 is an elevation; Fig. 2, a half-plan of the truck-frame; Fig. 3, a section through *x x*, and Fig. 4 an elevation showing formation of the upper part of the pedestal.

The truck-frame is constructed of four main pieces, each consisting of a rolled beam—viz., the side frames A and the transoms B, attached by an angle-iron or other form of brace C, connecting their webs together. The side frames have their ends bent upward and cut out to shape, as shown in detail in Fig. 4, to form the upper part of the pedestal-space and to give ample strength to the side frame above the journal-box, while providing sufficient space for a spring-pocket, the springs F being placed above the journal-boxes. The pedestals E are made of T-irons riveted to the side frames and may be prolonged upward around the top of the pedestal above spring-pocket, as shown on drawings at G, to reinforce the frame, which at that point forms the top of the pedestal.

The pedestal shown in the accompanying drawings is claimed in my application for Letters Patent on railway-car-truck frames filed December 12, 1894, Serial No. 531,586.

In all previous rolled-beam side frames for trucks which have been used or proposed the beam has been shallow, of sufficient depth only to sustain the weight. In this truck an important feature of the invention is that I make the side frame deep, not only to obtain strength, but to cheapen construction and to enable suitable pedestals to be formed.

I am aware that a pressed-steel truck-frame has been patented by D. L. Barnes possessing the same general outlines as the truck-frame described in this my specification; but pressed-steel truck-frames have been objected to because the flanges of the side frames and transoms cannot be made with sufficient thickness and of suitable form to give the desired strength, while in my invention it is apparent that any known form of rolled beam may be used, that the flanges can be made any form or thickness desired, and that the expense of cutting out plates to form frames and of flanging them is done away with, thus admitting a stronger and cheaper truck to be made.

It is apparent that a vertical pedestal having an opening at the bottom only may be used without departing from the nature of my invention.

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

1. A side frame for railway-car trucks formed of a commercial rolled beam having the lower flange, the web, and the upper flange bent upward, and a portion of the lower flange and web cut away so as to form pedestals, substantially as described.

2. A car-truck frame composed of the parallel continuous metal side beams having the pedestals formed within their ends and which are open at their outer sides, combined with removable pieces to fill the open outer sides of said pedestals, and a metal-beam transom connecting said side beams and rigidly secured thereto, said pedestals being of sufficient height to permit the journal-boxes to have a vertical play within them; substantially as set forth.

3. In a car-truck, the parallel continuous metal-beam side frames, and a pedestal-frame at each end of each side frame, each pedestal-frame having its upper part, one side and spring-pocket applied substantially within and attached to the web of the side frame and having its outer vertical side in a movable piece connected with the web of the side frame, combined with a beam connecting said side frames; substantially as described.

4. In a car-truck the rolled flanged continuous parallel beam side frames, and a pedestal at each end of each side frame and of a

height sufficient to permit the vertical movement therein of the axle-boxes, the outer vertical side of each pedestal having a movable piece, combined with the continuous rolled flanged parallel transom-beams extending transversely across the truck between said side frames and rigidly secured thereto, the axle-boxes in said pedestals, and springs yieldingly resisting the upward movement of said boxes in said pedestals; substantially as set forth.

5. The T-iron attached to the web of a commercial rolled-beam side frame and prolonged downward to form the lower portion of a pedestal, substantially as described.

6. In a car-truck, the continuous parallel metal-beam side frames, the ends of said beams having therein the pedestals provided with spring-pockets and open at their outer sides, combined with movable pieces for the outer sides of said pedestals, and a beam connecting said side frames and secured thereto; substantially as set forth.

7. In a car-truck, the parallel continuous metal-beam side frames, and a pedestal substantially within each end thereof and formed on one side by a guiding-piece attached to said web and on the other side by a movable piece, the pedestals being of sufficient height to permit vertical movement of the journal-boxes, combined with a beam connecting said sides; substantially as set forth.

8. In a car-truck the metal-beam side frames having the pedestal-spaces fashioned within the ends thereof, said pedestal-spaces being open at their outer sides and of a height to permit the vertical movement of the journal-boxes therein, combined with the rubbing-pieces along the inner vertical edges of said spaces, the outer movable rubbing-pieces closing the outer sides of said spaces and a transom connected at its ends to the webs of said side frames; substantially as set forth.

9. In a car-truck, the continuous parallel metal-beam side frames having the pedestal-spaces fashioned within the ends thereof, said pedestal-spaces being permanently closed at the bottom and open at the outer side and being of a height to permit the vertical movement of the journal-boxes therein, combined with the rubbing-pieces along the inner vertical edges of said spaces, a movable rubbing-piece closing the outer vertical side of said spaces and a beam connecting said side frames; substantially as set forth.

10. In a car-truck, the parallel continuous metal-beam side frames each having within the web at its ends the pedestal-spaces to receive and permit the vertical movement of the axle-boxes, combined with a beam connecting said side frames, and the pedestal-frames applied to close said spaces and attached to said web and one section of which is movable to permit the escape of said boxes, said pedestal-frames each having one vertical side and the lower side in a continuous integral piece, and the other vertical side in a separate piece; substantially as set forth.

11. A car-truck comprising the connected commercial rolled-beam side frames having their ends bent upward and a portion of said ends cut away to form pedestal-spaces for the axle-boxes, and pedestal-frames secured to the web of said frames for said boxes; substantially as set forth.

12. In a car-truck, the parallel continuous metal-beam side frames, and a pedestal at each end of each thereof and formed on one side by a guiding-piece attached to vertical web of said side frames, and on the other side by a movable piece, the pedestal being of sufficient height to permit vertical movement of the journal-boxes, combined with a beam connecting said sides; substantially as described.

13. A car-truck frame composed of the parallel continuous metal side beams, and metal-beam transoms connecting said side beams and rigidly secured thereto, in combination with a pedestal attached to the web of said side frame and having an opening at its side, a removable piece of metal to close said opening, a journal-box moving vertically within said pedestal, and coiled metal springs inserted above the journal-boxes, and within the pedestals, substantially as described.

14. In a car-truck, the parallel continuous metal-beam side frames, and a pedestal at each end of each side frame, each pedestal having its upper part, containing a spring-pocket, and one side attached to the web of the side frame, and its other side and lower part formed by a metal pedestal-frame also attached to said web, combined with a beam connecting said side frames and secured at its ends thereto and the movable piece completing the outer vertical side of said pedestal; substantially as set forth.

15. In a car-truck, the parallel continuous metal-beam side frames, and a pedestal at each end of each side frame, each pedestal having its upper part and one side attached to the web of the side frame, and its other side and lower part formed by a metal pedestal-frame also attached to said web, combined with a beam connecting said parallel side beams and secured at its ends thereto and the movable piece completing the outer vertical side of said pedestal; substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE ROBERT JOUGHINS.

Witnesses:

JOHN WHETSTONE,

ALLEN P. MITCHELL.