

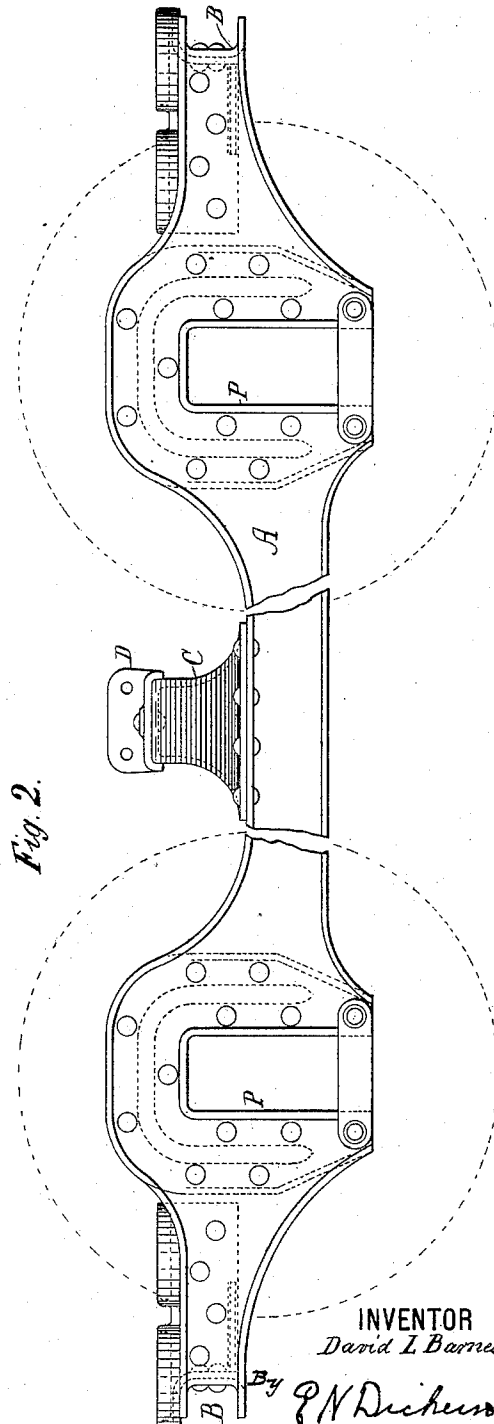
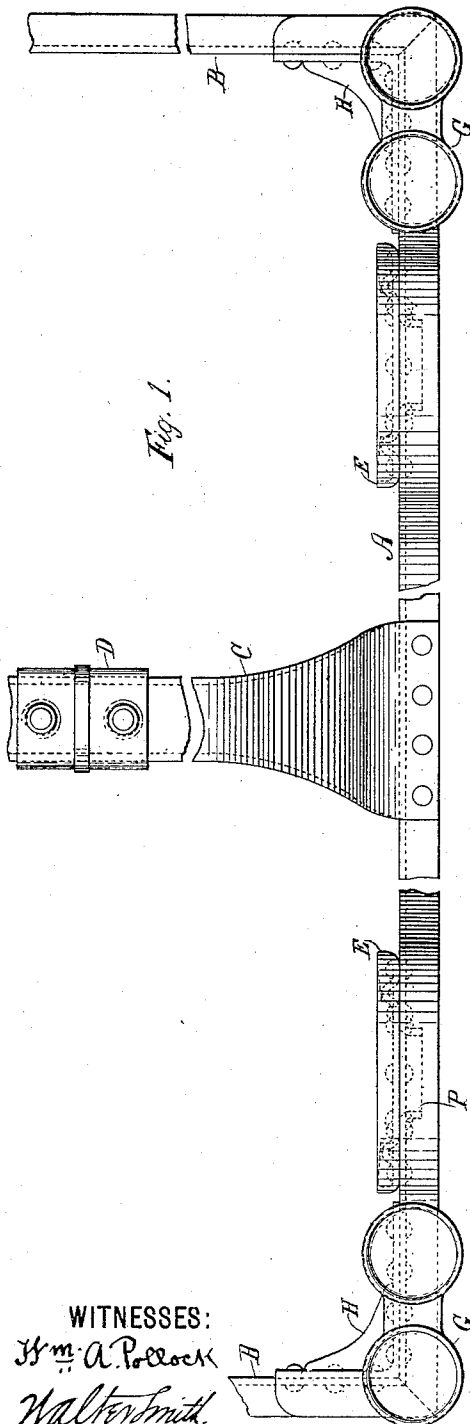
(No Model.)

4 Sheets—Sheet 1.

D. L. BARNES.  
FRAME FOR CAR TRUCKS.

No. 468,491.

Patented Feb. 9, 1892.



WITNESSES:  
H. M. A. Pollock  
Walter Smith

INVENTOR  
David L. Barnes.

By P. N. Dickerson

ATTY.

(No Model.)

4 Sheets—Sheet 2.

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Fig. 3.

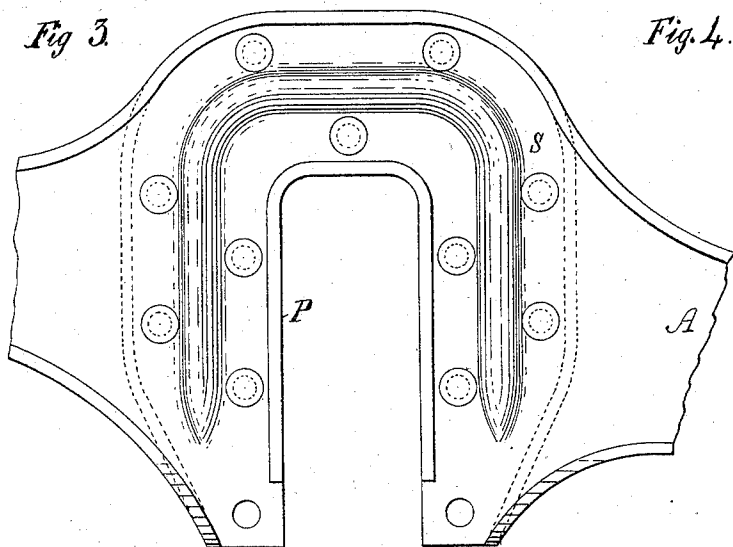


Fig. 4.

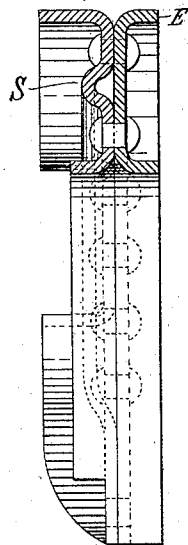


Fig. 5.

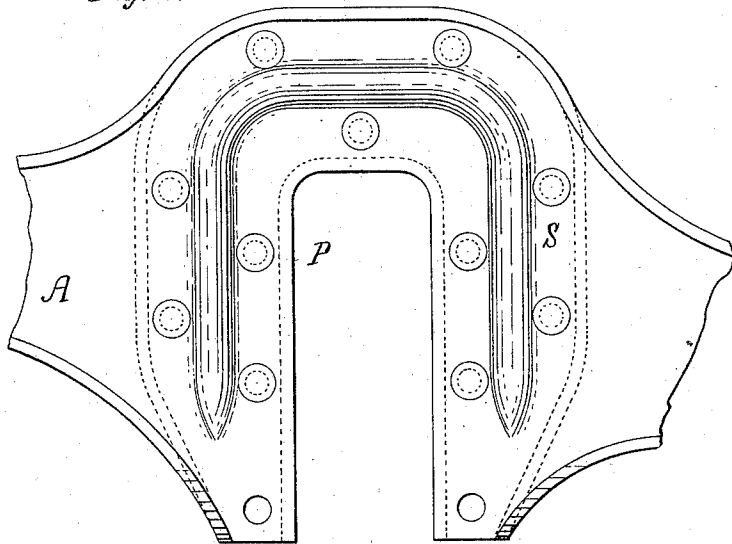
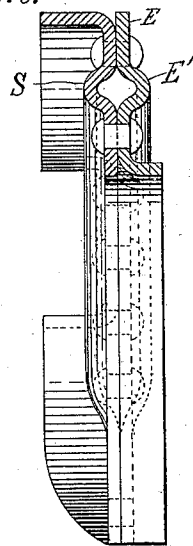


Fig. 6.



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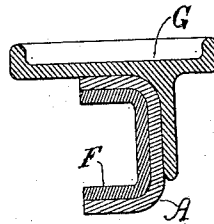
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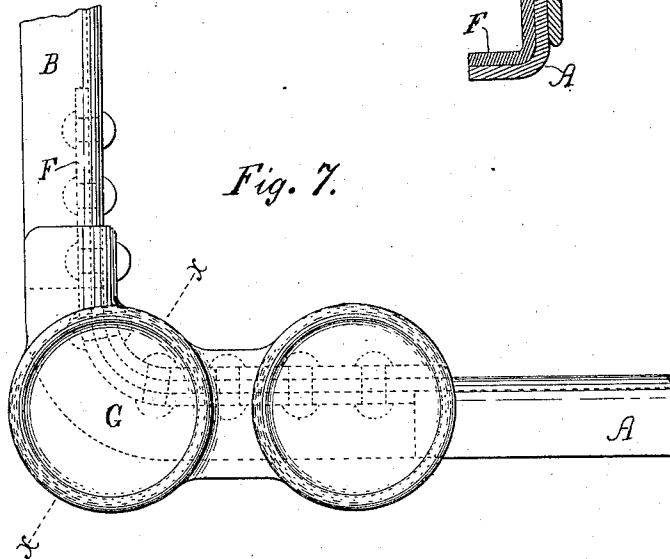
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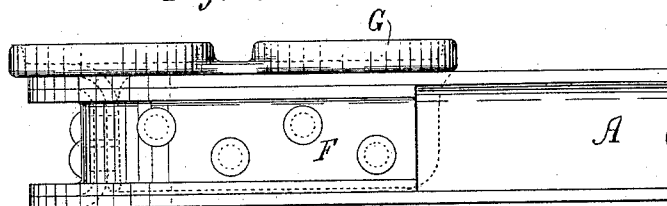
*Fig. 8.*



*Fig. 7.*



*Fig. 9.*



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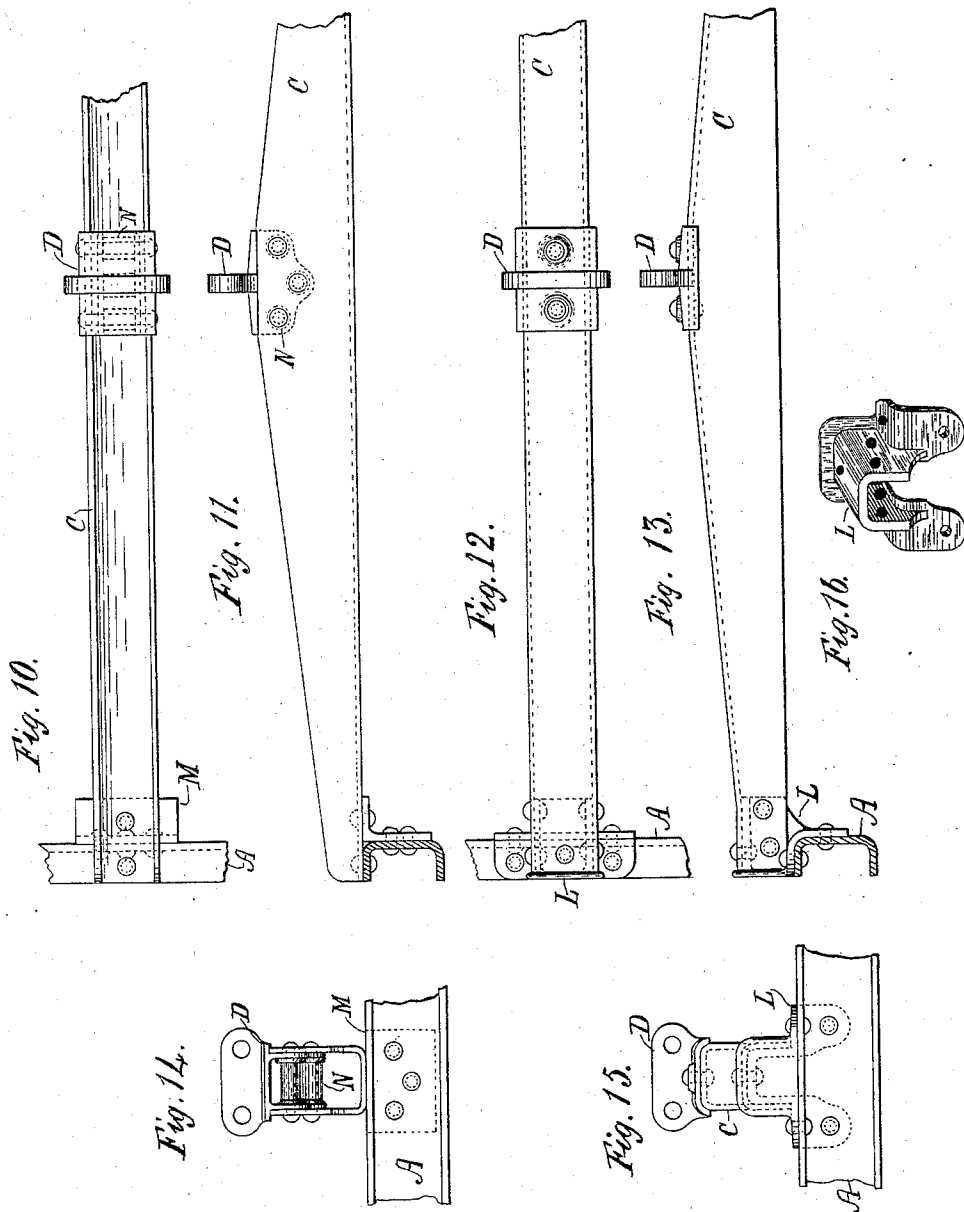
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# UNITED STATES PATENT OFFICE.

DAVID L. BARNES, OF CHICAGO, ILLINOIS.

## FRAME FOR CAR-TRUCKS.

SPECIFICATION forming part of Letters Patent No. 468,491, dated February 9, 1892.

Application filed June 6, 1891. Serial No. 395,402. (No model.)

### *To all whom it may concern:*

Be it known that I, DAVID L. BARNES, of Chicago, Cook county, State of Illinois, have invented a new and useful Improvement in Frames for Moving Vehicles, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

This invention relates to an improved construction, largely made of pressed steel, in frames for moving vehicles, and it is especially designed and applicable to the frames of street-cars, sometimes known as "trams-cars."

My invention will be readily understood from the accompanying drawings, in which—

Figure 1 represents a plan view of one side of my frame, partly broken away; Fig. 2, a lateral elevation of the same; Fig. 3, a side elevation of the pedestal; Fig. 4, a vertical cross-section therethrough; Fig. 5, a side elevation of a slightly-modified form of pedestal; Fig. 6, a vertical cross-section therethrough; Fig. 7, a plan view of the detail of the spring-plates on the corner of the frame; Fig. 8, a section through Fig. 7 on the line  $x$ ; Fig. 9, a side elevation of Fig. 7; Fig. 10, a plan view of the transom; Fig. 11, an elevation, partly in section, of the same; Fig. 12, a plan view of a slightly-modified form of the transom; Fig. 13, an elevation, partly in section, of the same; Fig. 14, an end elevation of the transom, Fig. 11; Fig. 15, an end elevation of the transom, Fig. 13; and Fig. 16, a perspective of the transom-end connecting-piece shown in Fig. 13.

My frame consists, essentially, of the side pieces A A, the end pieces B B, and the transom C. These pieces are made, by preference, of pressed steel. The end pieces are adapted to fit the side pieces, being attached thereto in the manner presently to be explained.

In the side frames A are pressed the pedestals P, to the back of which are riveted stiffening-pieces E. I prefer to press a rib S in the pedestals P, as shown in Figs. 3 and 5. These stiffening-pieces are by preference provided with a flange extending around the pedestal-opening, and they may likewise be provided with a depression E', corresponding to the similar channel S in the pedestal.

The end frames B are connected to the side frames A by means of the spring-plates G. The end frames may make an angular butt against the side frames, as shown in Fig. 1, when the spring-plate is arranged with a strengthening-flange H within the angle; or a round-corner connection may be employed, as shown in Fig. 7, in which case the side frame is bent around to meet the end frame. (Shown by the dotted line above the spring-plate.) In this case the spring-plate G is correspondingly shaped, and an external strengthening-channel F is fitted into the outside, the three parts being riveted through.

The construction of the transom C may be, as shown in Figs. 10 and 11, with an opening above, or, as shown in Figs. 12 and 13, with an opening below. In the form shown in Figs. 10, 11, and 14 the end of the transom rests directly upon the side frame and the angular piece M is riveted to the transom and the side frame for additional support. The center supporting-plate D, which is preferably a casting, is supported upon the center of the transom, as shown in Fig. 14, spools N surrounding the rivets and serving to separate the parts. In Figs. 12, 13, and 14 the attachment of the central supporting-piece D is made directly upon the top of the transom by riveting. The open ends of the transom fit around the casting L, as clearly shown, which is itself riveted both to the transom and to the side frame A.

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

1. The side frame A, having corrugation S, and strengthening-piece E, with corresponding corrugation E', substantially as described.
2. The combination of the transom C, side frames A, and intermediate casting L, substantially as described.

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

DAVID L. BARNES.

Witnesses:

CHARLES JENCKES BARNES,  
FRANK H. CLARK.