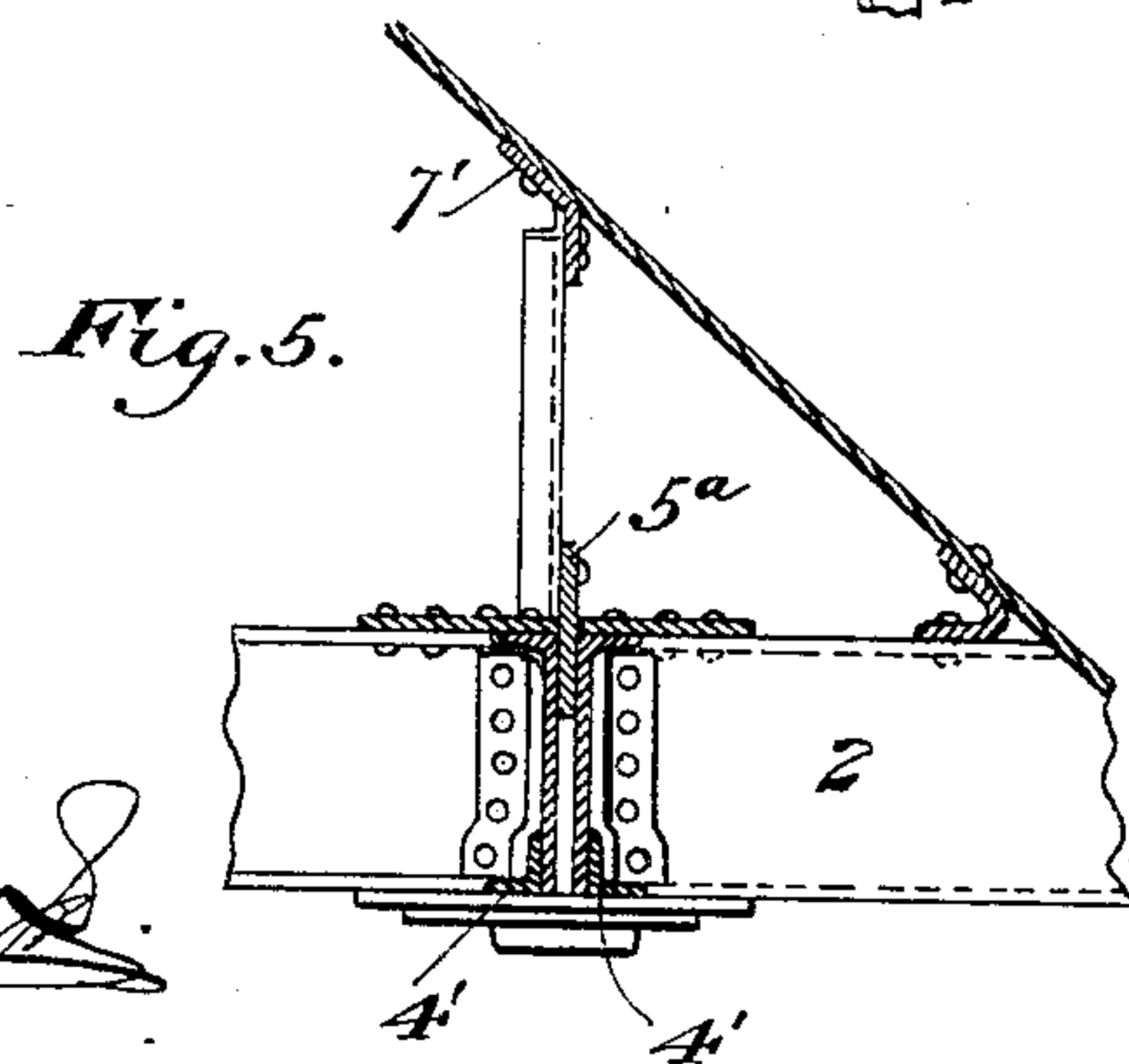
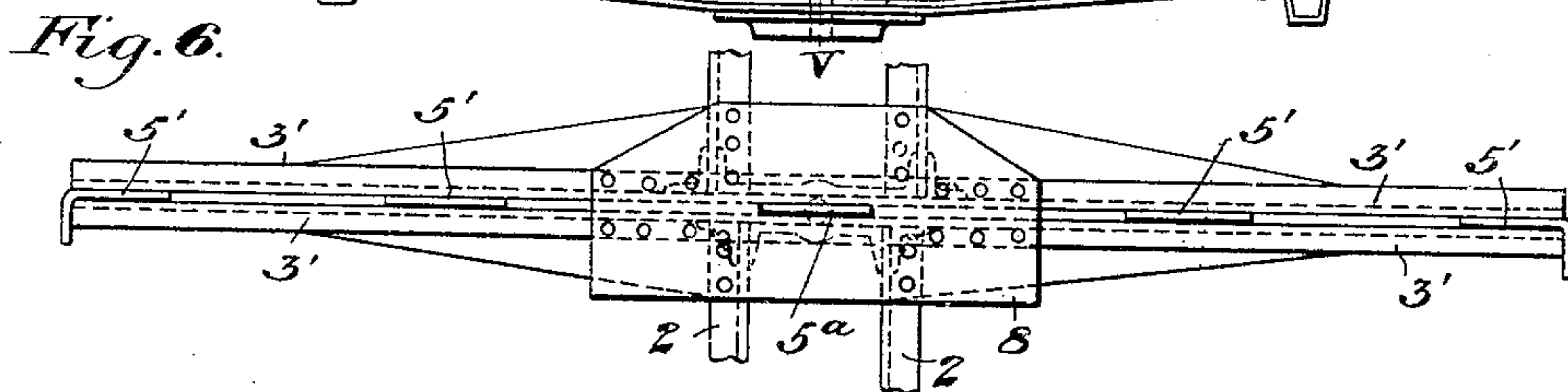
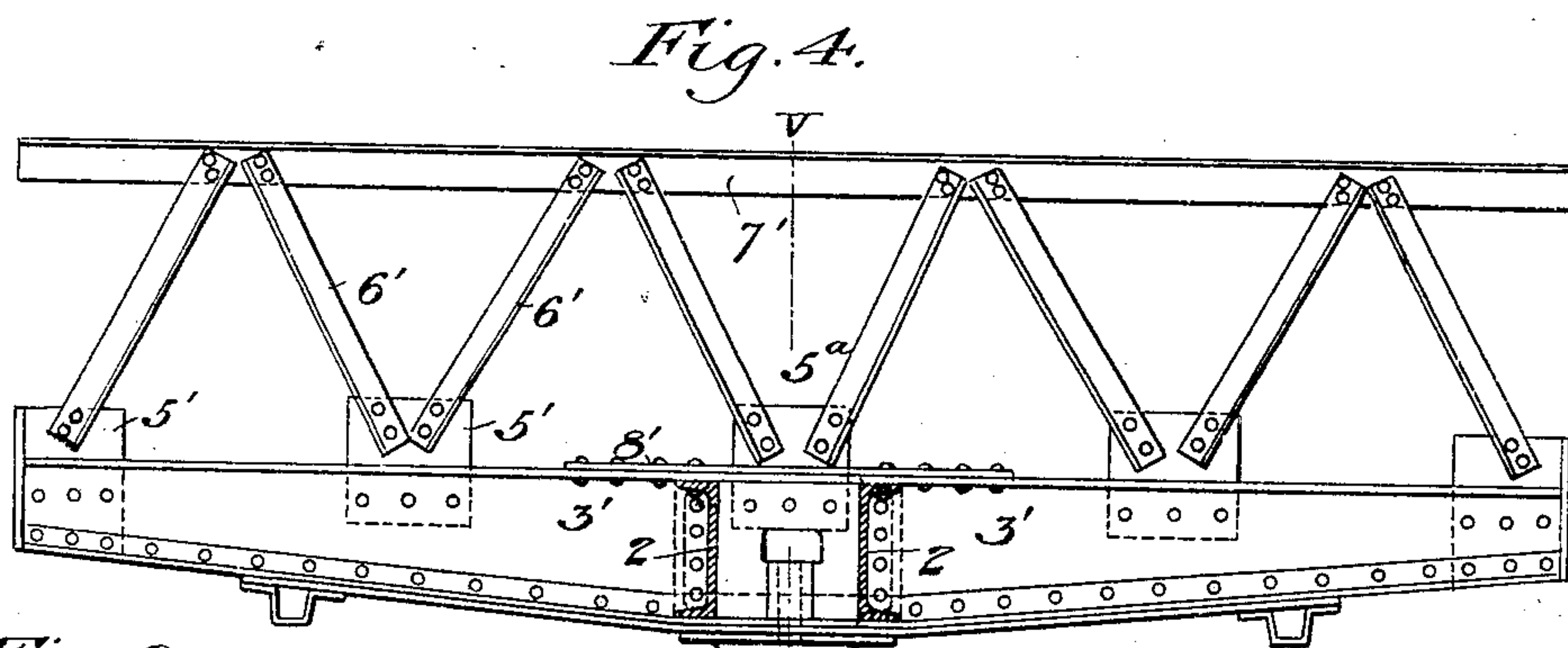
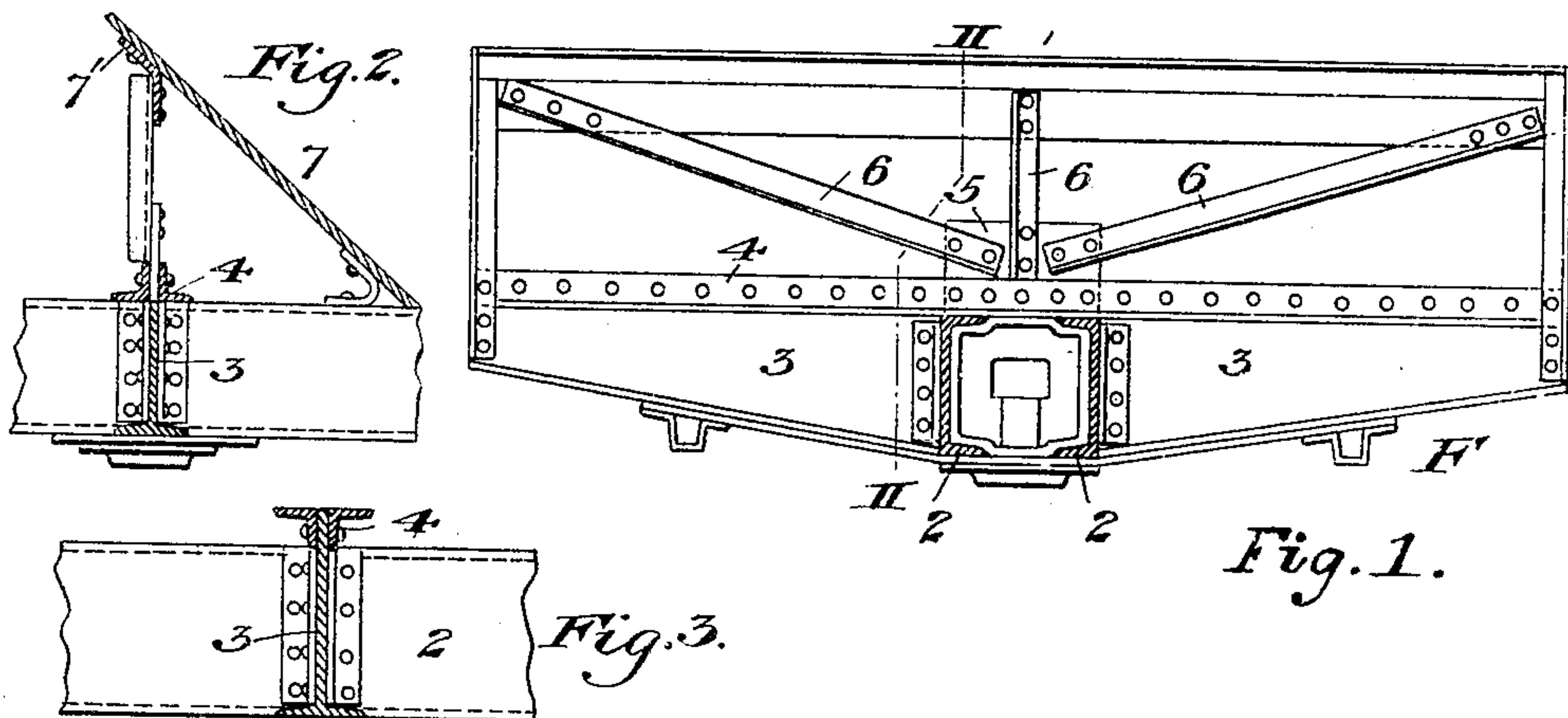


No. 803,331.

PATENTED OCT. 31, 1905.

E. I. DODDS.
CAR FRAME.

APPLICATION FILED JAN. 23, 1904.



WITNESSES
L. A. Conner
H. W. Corbin

INVENTOR
Ethan I. Dodds

UNITED STATES PATENT OFFICE.

ETHAN I. DODDS, OF AVALON, PENNSYLVANIA, ASSIGNOR TO PRESSED STEEL CAR COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

CAR-FRAME.

No. 803,331.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed January 29, 1904. Serial No. 191,118.

To all whom it may concern:

Be it known that I, ETHAN I. DODDS, of Avalon, Allegheny county, Pennsylvania, have invented a new and useful Car-Frame, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows in vertical cross-section through the center sill of a car a car-frame constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section on the line II II of Fig. 1. Fig. 3 is a section similar to Fig. 2, showing a modification in which the flanged tension members on the upper portion of the bolster are reversed in position. Fig. 4 is a view similar to Fig. 1, illustrating a modified construction. Fig. 5 is a vertical longitudinal section on the line V V of Fig. 4, and Fig. 6 is a plan view of the body-bolster shown in Figs. 4 and 5.

My invention is an improvement upon the invention illustrated and claimed in my application Serial No. 191,116, (Case A.)

In the drawings, 2 represents the center sill of the car, which may be made of any suitable construction, but is preferably constituted of parallel channels which may have their flanges directed inwardly, as shown in Fig. 1, or outwardly, as shown in Fig. 4.

3 3 are the members of the body-bolster, which extend at right angles from the center sill. These parts of the body-bolster are composed of flanged beams. In Fig. 1 I show two distinct sections 3 3, which are fixed to the sides of the center sill, and in Figs. 4, 5, and 6 I show the bolster as constituted of a continuous member, the center sill being divided and being fixed at the ends to the sides of the bolster.

The bolster is flanged along one edge with an integral flange and at the other edge is unflanged, except by the attachment of reinforcing flanged tension members 4 4. In the construction shown in Figs. 4, 5, and 6 the integral flanges of the beams, which constitute the bolster, are at the upper edge, and the attached flanged members 4' are at the lower edge, while in the construction shown in Figs. 1, 2, and 3 the integral flange is at the lower edge of the bolster, and the attached flanged member 4, which in this case constitutes a ten-

sion member, is at the upper edge of the bolster.

The bolster shown in Figs. 1, 2, and 3 is composed of a single beam-section, and the bolster shown in Figs. 4, 5, and 6 is composed of two parallel beam-sections. The sections in each case are best made by shearing a channel-beam or I-beam longitudinally with a bias cut through its web.

In Figs. 1, 2, and 3 the web of the bolster extends above the level of the center sill, and the tension member 4 extends along and between both sections 3 3 of the bolster, thus connecting them. Above the center sill is a plate or web 5, which is interposed between the flanged members 4 4. From this plate or web struts or braces 6 6 extend upwardly to the girder 7' of the car-floor 7 of the car to which they are attached. In Figs. 4, 5, and 6 I show a number of these plates 5' 5^a, which are interposed between the members of the bolster and extend above the level thereof. Struts 6' extend from these plates, as in Fig. 1, to the floor-girder 7' of the car. The middle plate 5^a, which is directly above the center sill, extends through a vertical slot in a tension-plate 8, which is fixed to the top of the bolster and serves to connect the bolster with the center sill and with other parts of the frame.

Within the scope of my invention the parts may be modified in construction.

I claim—

1. In combination with a bolster, a tension member therefor, a member inclosed by said tension member and fixed to the web of the bolster, and a strut extending upwardly from said inclosed member; substantially as described.

2. In combination with a bolster and center sill, a connecting-plate, a member extending upwardly from the web of the bolster through a slot in the connecting-plate, and a strut extending upwardly from said plate; substantially as described.

In testimony whereof I have hereunto set my hand.

ETHAN I. DODDS.

Witnesses:

THOS. K. LANCASTER,
LAURA KLEINFELDER.