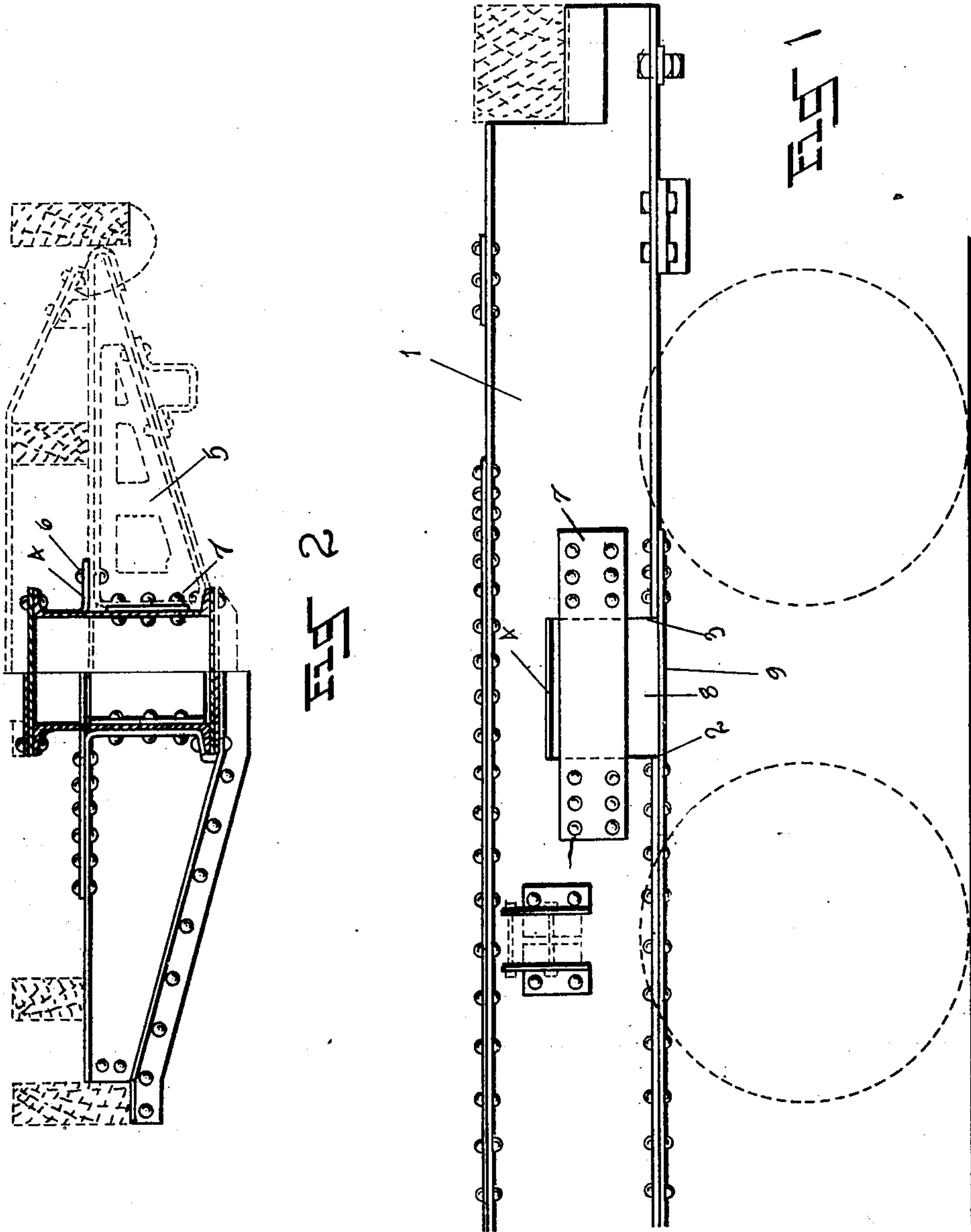


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913,143.

Patented Feb. 23, 1909.  
2 SHEETS—SHEET 1.



WITNESSES:

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*Roy Breunholtz*

*Frank L. Irwin*  
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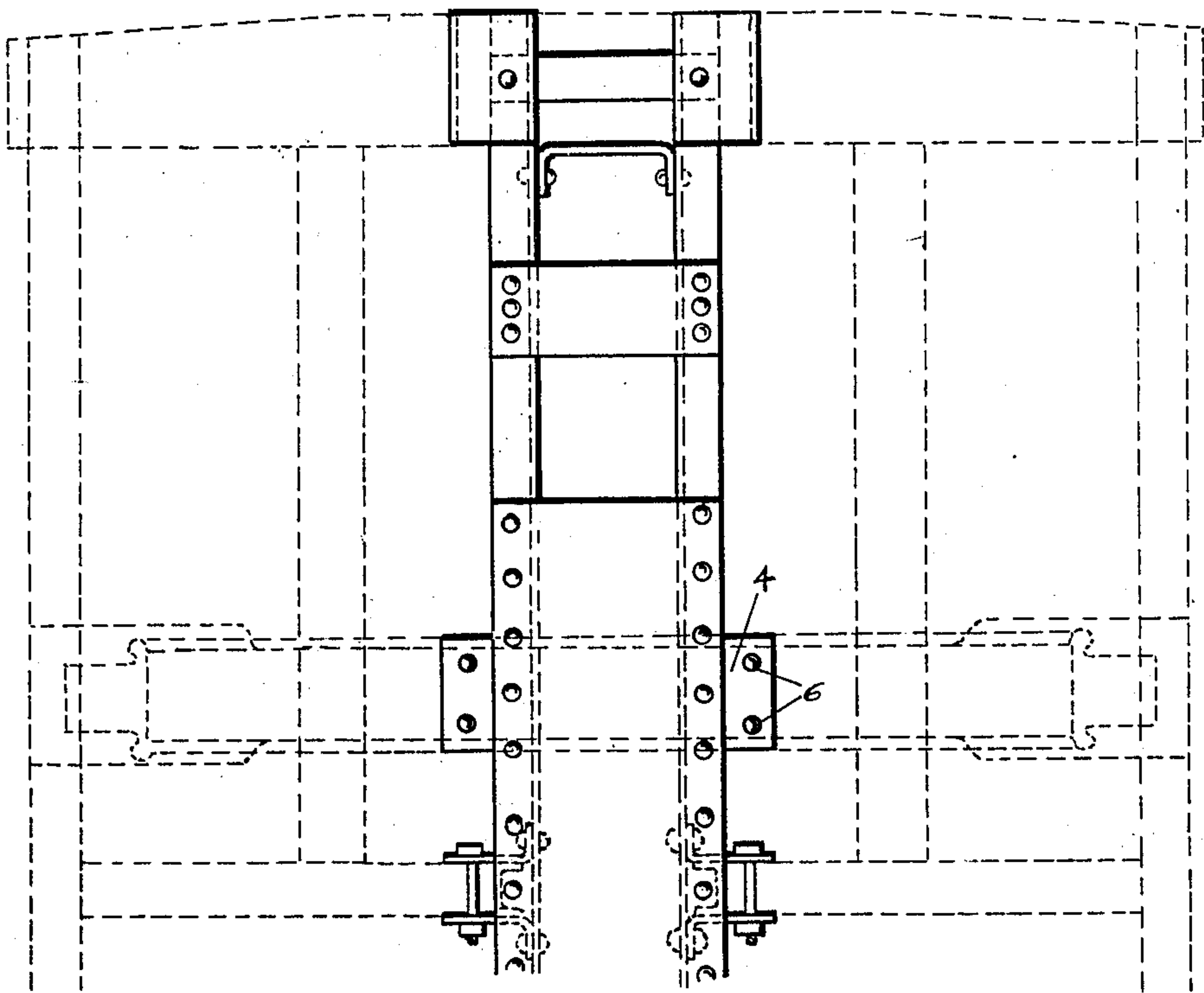


Fig 3

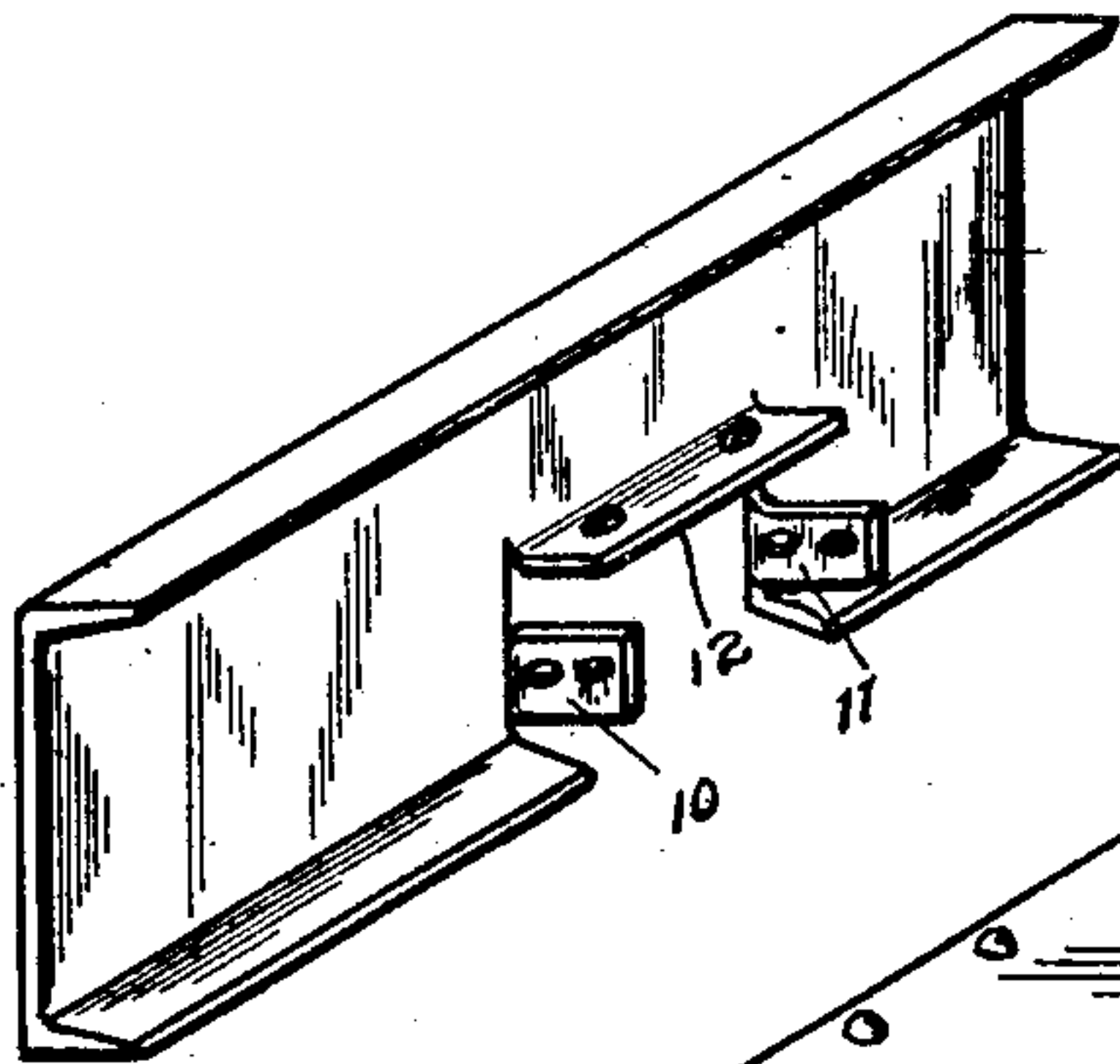


Fig 5

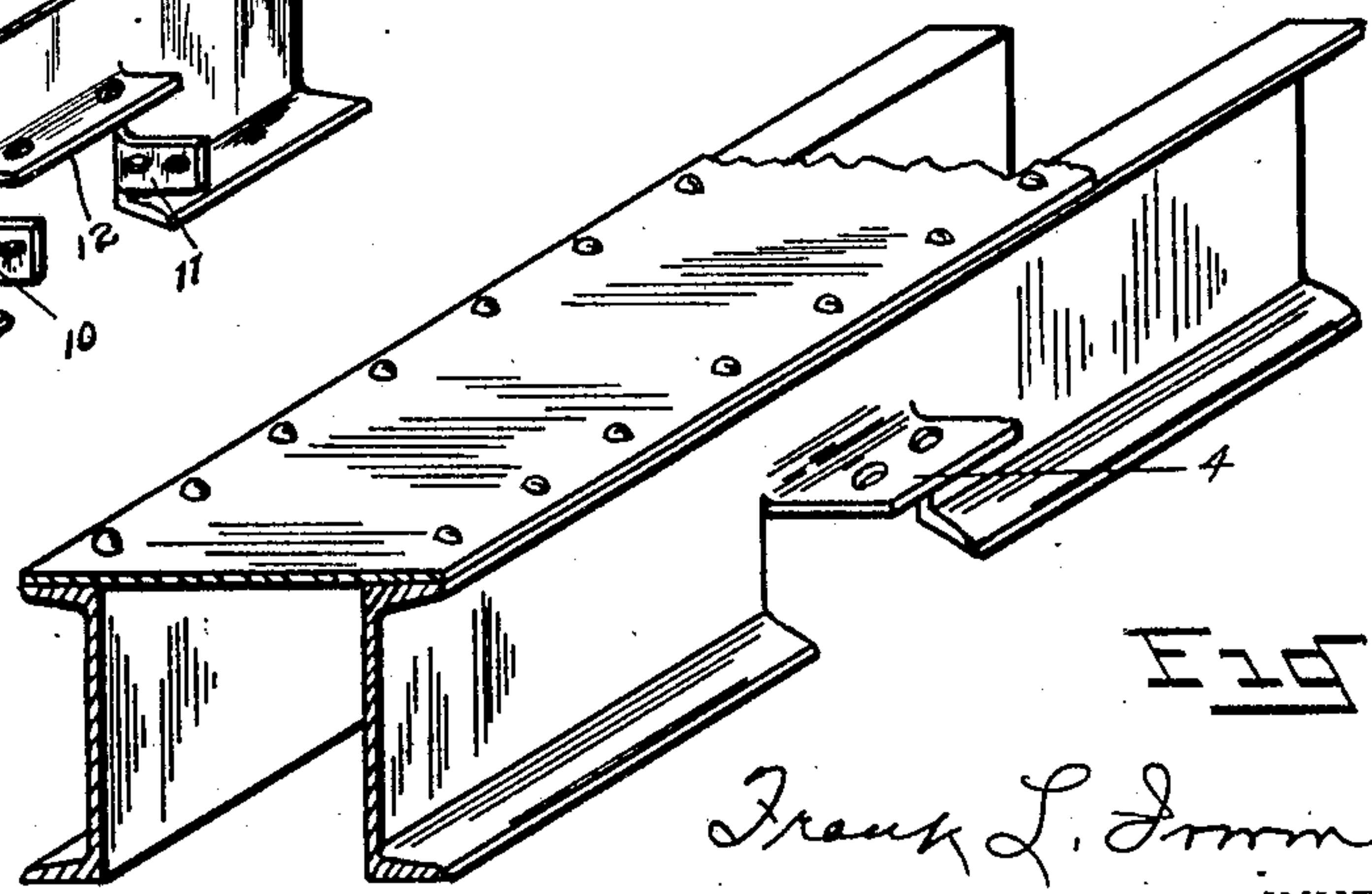


Fig 4

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# UNITED STATES PATENT OFFICE.

FRANK L. IRWIN, OF COLUMBUS, OHIO, ASSIGNOR TO THE RALSTON STEEL CAR COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

## CAR-BOLSTER-REINFORCING CONSTRUCTION.

No. 913,143.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed June 19, 1908. Serial No. 439,333.

*To all whom it may concern:*

Be it known that I, FRANK L. IRWIN, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Car-Bolster-Reinforcing Construction, of which the following is a specification.

My invention relates to improvements in car bolster reinforcing construction and has especial reference to cars having a center sill formed of a pair of channels or girders, through which the bolster is adapted to be inserted, or against which the inner ends of the bolster are adapted to be secured.

It consists essentially in the slitting of the center sill girders or channels, bending the slitted portion outwardly to engage the bolster body, and then securing the slitted portion to the bolster by means of rivets or otherwise, as preferred. The girders or channels of the center sill may be slit in such manner that several slitted portions result, and which may be thereupon turned outwardly, and after the insertion of the bolster, the slitted portions may be secured thereto at the top and sides of the bolster, thereby giving a very strong reinforcement thereto. In the construction shown in the drawings and herein described, I contemplate the slitting of the center sill channel or girder from beneath and the positioning of the bolster through the resulting opening, whereby the bolster is supported at the front and back by the walls of the channel or girder resulting from the slitting operation. Further, I have illustrated a reinforcing member which is adapted for use with a bolster by being inserted through transverse slots therein and at its ends secured to the channel or girder on both sides of the opening into the center sill occupied by the bolster. This construction is especially applicable to the repair of bolsters which are constructed with filler members whereby a transverse opening is formed through the bolster on either side of the center sill. These features and others and their combinations will be hereinafter fully described.

In the drawings which are hereto attached and hereby made a part of this specification, Figure 1 is a side view of a portion of the center sill construction having one form of my bolster reinforcement thereon; Fig. 2 is a view showing a bolster at one side, and a

cross-bearer at the other; Fig. 3 is a part plan view of an underframe construction showing the bolster reinforcement; Fig. 4 is a perspective of a portion of the center sill showing a bolster reinforcing construction illustrated in Fig. 3; Fig. 5 is a perspective of a center sill channel illustrating a modified form of reinforcing construction.

In the drawings in which the same numeral indicates the same part throughout, 1 is a center sill construction mounted upon a truck which is conventionally shown; the center sill here shown is formed of a pair of channels oppositely faced each of which is slit along the lines 2 and 3, and the portion thus cut loose at its edges is bent upwardly as shown at 4, to occupy approximately a right angle with the channel. A bolster shown at 5 is thereupon inserted through the registering openings thus formed through the center sill channels, and the outwardly bent portion 4 is secured upon the top thereof by means of the rivets shown at 6, whereby the bolster is reinforced at that point; to further reinforce the bolster and also to strengthen the center sill channel at the point where the portion 4 is cut away, I provide a bar or plate 7 which is adapted to be inserted through a transverse opening in the bolster construction and is then riveted to the center sill channel at each side of the opening 8 left therein by slitting out the portion 4. Further, the bottom cover plate 9 on the center sill lies beneath the bolster, and therefore the bolster when thus positioned is reinforced by the walls of the slitted opening at the front and back sides, by the slitted portion 4 at its top, and by the bottom cover plate 9, thereby rendering the reinforcement very substantial, and at the same time simple and easily constructed.

In Fig. 4, I have illustrated in perspective the slitted portion; in Fig. 3 the same is shown in the plan view from above.

In Fig. 5, I have shown a modified construction which is formed by slitting the center sill channel vertically then longitudinally and then vertically at the ends of the longitudinal slit; as shown, this slitting forms 3 slit portions, 2 of which, 10 and 11, may be bent outwardly to embrace the sides of the bolster, and the other, 12, may be bent upwardly to embrace the top of the bolster; after the bolster is positioned in the opening thus formed through the center sill



channels, the side extensions 10 and 11 and the top extension 12 are bolted or riveted appropriately thereto, and the bolster is thereby securely reinforced against stresses due to the operation of the car.

I do not desire to confine myself strictly to the forms of construction shown in the drawings and herein described, but wish to claim any modifications which are within the spirit of my invention.

What I claim is:

1. A center sill having a transverse opening formed therein by slitting the same and bending the slitted portion outwardly, a bolster inserted through said opening, and means for securing said slitted portion to said bolster.

2. A center sill having an opening formed therein by slitting the same from its bottom

edge upwardly and bending the slitted portion laterally, a bolster inserted through said opening, means for securing said slitted portion to said bolster, and a member positioned transversely through said bolster and secured at its ends to said center sill.

3. A center sill channel or girder having an opening on its lower side formed by slitting the same and bending the slitted portions laterally, a bolster inserted through said opening, and means for securing said slitted portions to said bolster whereby the latter is reinforced.

In testimony whereof I affix my signature in the presence of two witnesses.

FRANK L. IRWIN.

Witnesses:

HORACE KERR,  
A. RAGER.