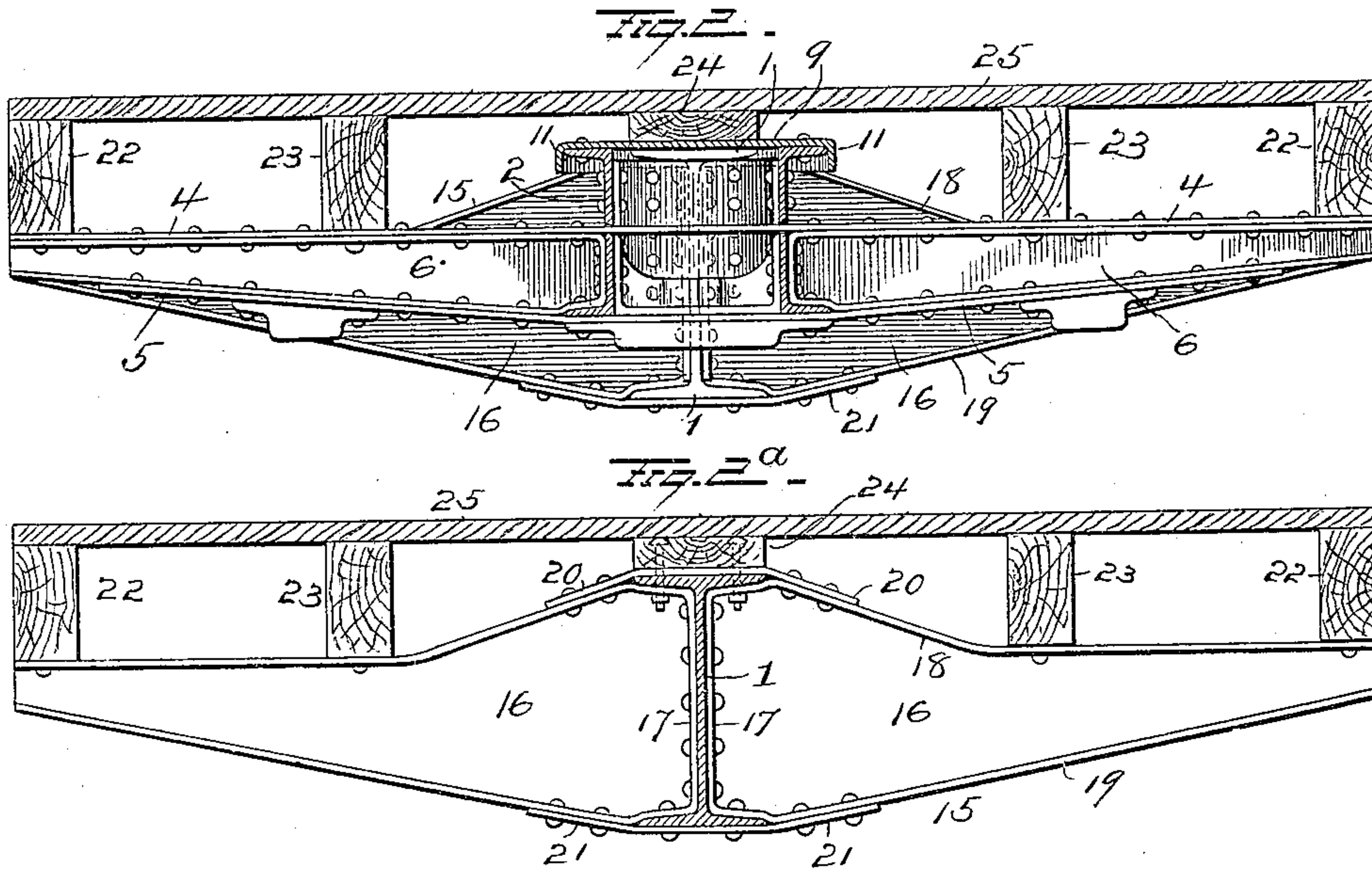
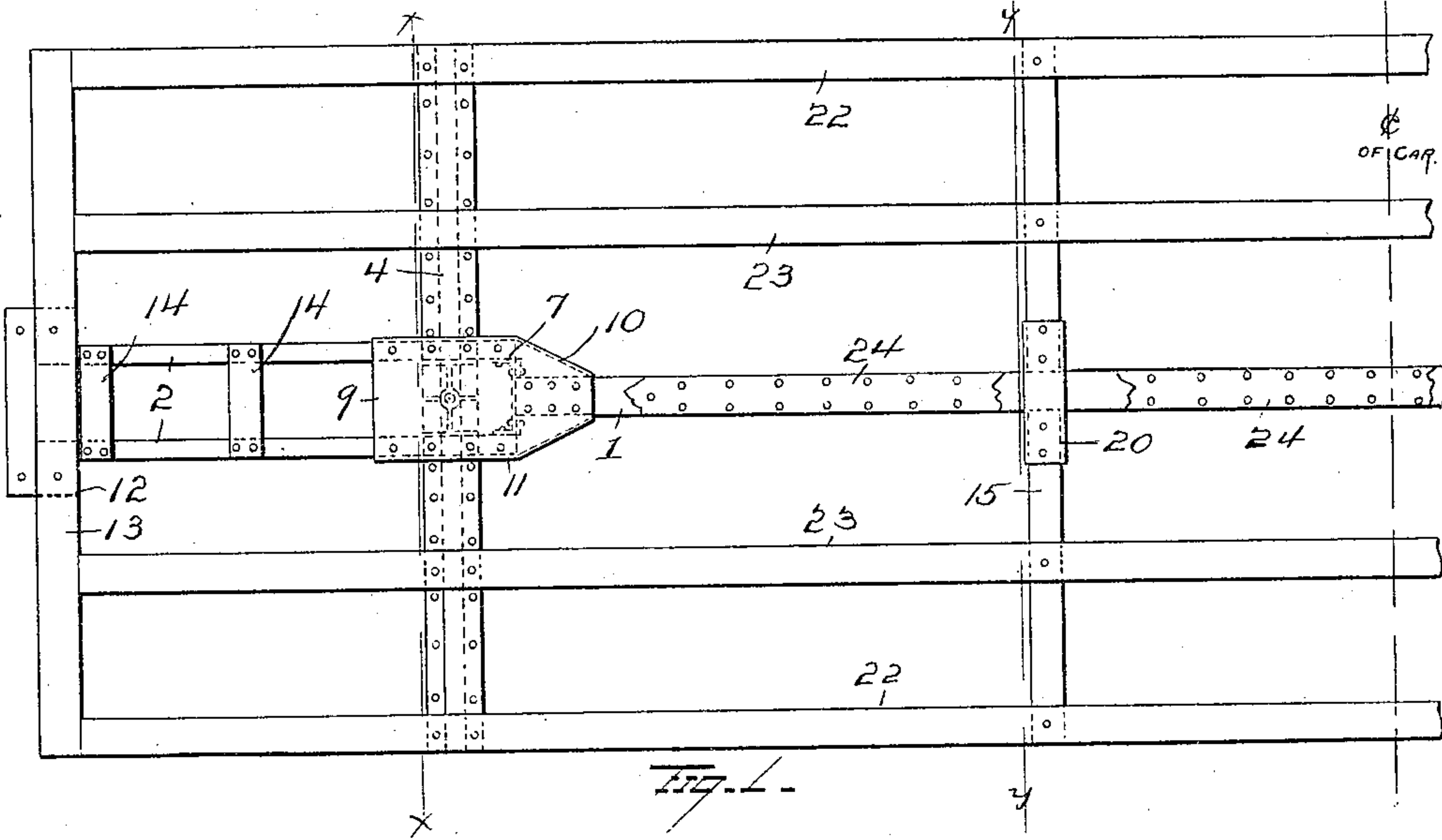


A. BECKER.
UNDERFRAME FOR RAILWAY CARS.
APPLICATION FILED APR. 20, 1908.

976,426.

Patented Nov. 22, 1910.

2 SHEETS—SHEET 1.



WITNESSES
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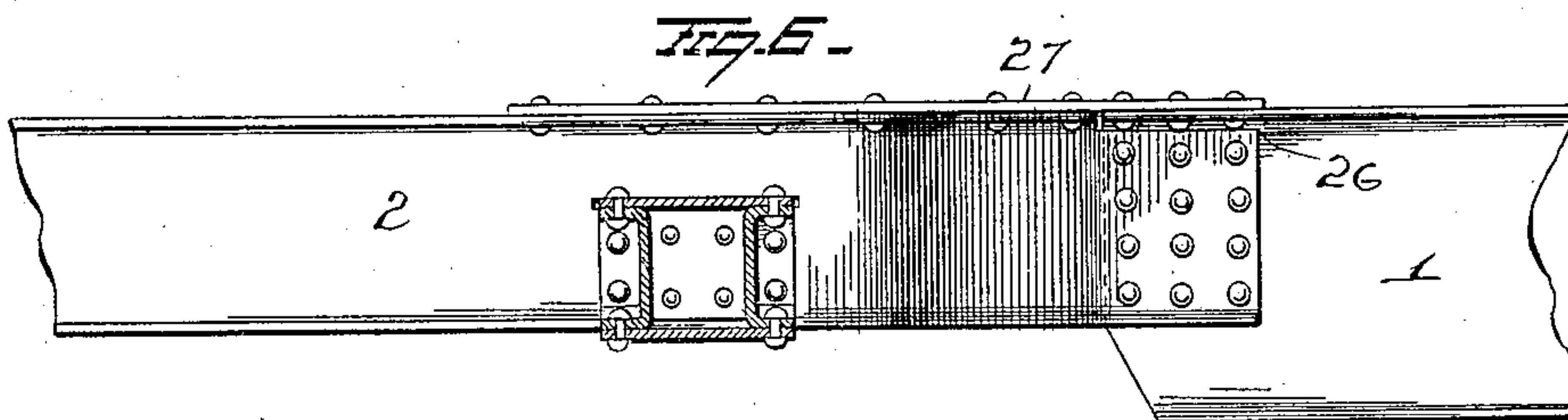
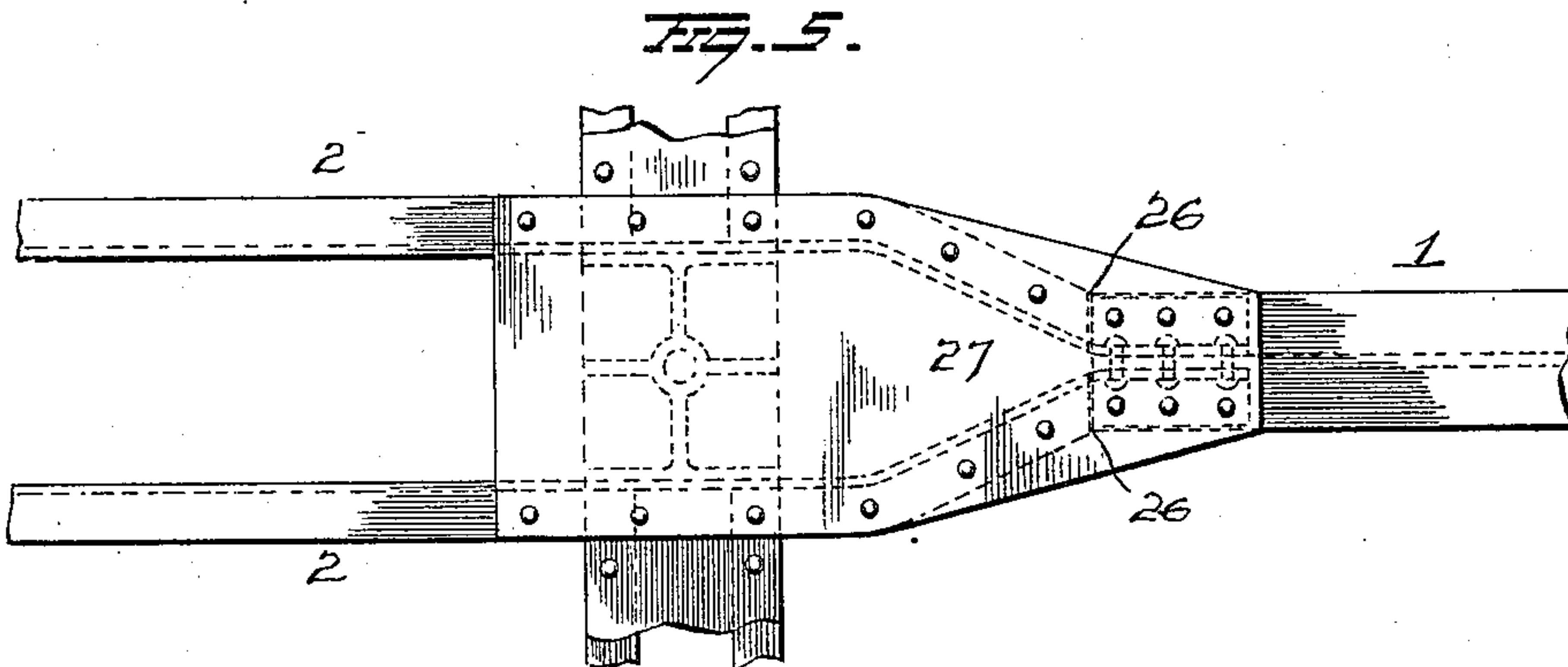
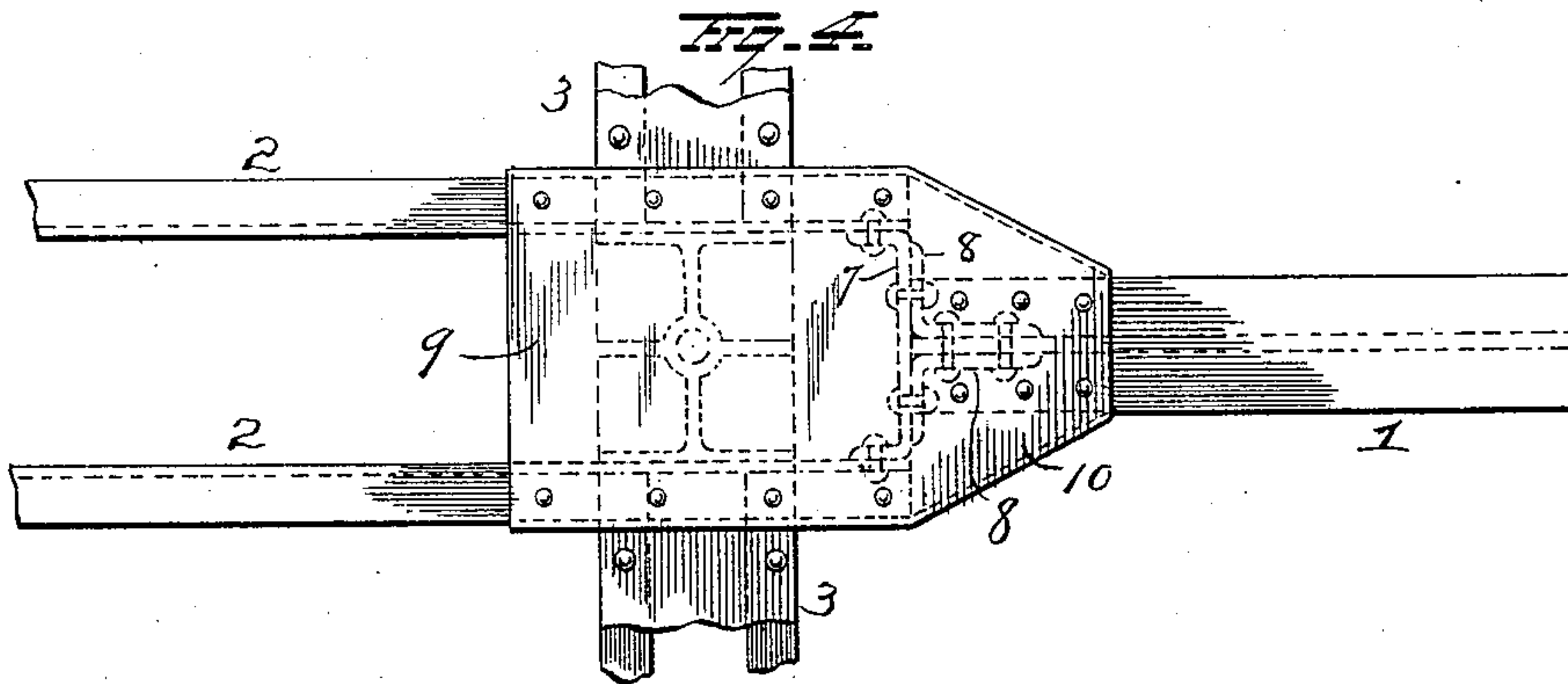
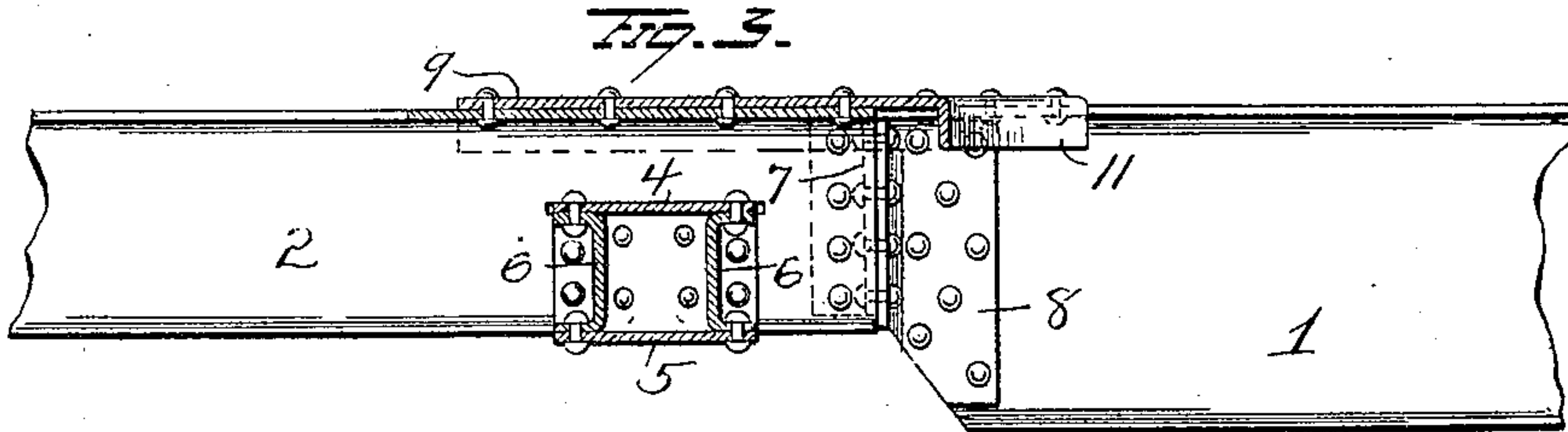
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ANTON BECKER, OF COLUMBUS, OHIO, ASSIGNOR TO THE RALSTON STEEL CAR COMPANY, OF COLUMBUS, OHIO.

UNDERFRAME FOR RAILWAY-CARS.

976,426.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed April 20, 1908. Serial No. 428,156.

To all whom it may concern:

Be it known that I, ANTON BECKER, of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Underframes for Railway-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in underframes for railway cars,—the object of the invention being to simplify and reduce the cost to a minimum of the construction of such underframe, without in any way sacrificing the strength, rigidity and efficiency of the same.

With this object in view the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is a partial plan view illustrating a car underframe embodying my improvements. Figs. 2, 2^a are sectional views taken on the lines $x-x$ and $y-y$ of Fig. 1. Fig. 3 is a partial longitudinal sectional view. Fig. 4 is an enlarged plan view of a portion of the structure shown in Fig. 1, and Figs. 5 and 6 are views illustrating a slight modification.

1 represents a center girder which consists of an I-beam and 2, 2, represent draft sills, preferably consisting of channel irons disposed parallel with each other and suitably spaced apart. In proximity to respective ends of the structure, bolsters 3 are located and each of these bolsters comprises compression and tension plates 4—5, separated at respective sides of the draft sills by channel irons or fillers 6, the latter terminating at their inner ends at the respective draft sills and secured to the latter. The compression plate 4 of each bolster passes through respective draft sills, the latter being slotted for this purpose,—and thus it will be seen that the draft sills pass partially through the bolsters.

The channel irons which compose the bolster are of less depth than that of the I-beam which constitutes the center girder and therefore the forward end of the latter is contracted in depth to facilitate its connection with the draft sills in rear of the bolster. In effecting this connection between the center girder and the draft sills, a

U-shaped plate 7 is disposed between the respective draft sills and secured thereto,—said plate affording means for the attachment of angle-irons 8 by means of which the center girder is connected with the draft sills, said angle-irons 8 being secured to the web of the I-beam center girder. The draft sills and center girder are so related that their upper surfaces will be in alinement with each other, and upon the draft sills a plate 9 is secured and provided with a rearwardly extending, tapering portion 10, which is secured to the upper flanges of the I-beam center girder, thus firmly connecting said girder and draft sills. The plate 9—10 is provided at its edges with downwardly projecting flanges 11 which serve to materially strengthen and stiffen said plate and therefore the connection between the center girder and draft sills.

The forward ends of the draft sills are provided with seats 12 for an end sill 13 and between the ends of said draft sills they are preferably braced by means of transverse plates 14.

At suitable points intermediate of the bolsters, cross-beams or bearers 15 are located. Each cross-beam or bearer comprises two members 16, each of which is made tapering in form and its inner end is made of a depth approximately equal to the depth of the I-beam center girder to which latter it is secured, and to facilitate this connection each member 16 is provided at its inner edge with a vertical flange 17 for the passage of suitable bolts. Each cross-bearer member 16 is also provided along its upper and lower edges with lateral flanges 18—19, and to these flanges the end portions of compression and tension plates 20—21 are secured.

The bolsters and cross-bearers cooperate to support side sills 22 and furring strips 23. Shallower furring strips 24 are located upon and securely riveted to the flanges at the upper edge of the I-beam center girder. All of the furring strips aline with each other and with the side sills to support the car flooring 25. By securing the furring strips 24 to the flanges of the I-beam center girder, the latter will be greatly strengthened and its rigidity increased so as to prevent lateral deflection of said girder.

In the modified construction shown in Figs. 5 and 6, the rear ends of the draft sills are bent inwardly toward each other and se-

cured to the web of the I-beam center girder at respective sides of the latter. The upper edges of the draft sills are recessed, as shown at 26, to receive the upper flanges of the I-beam center girder. This connection between the draft sills and center girder may be further strengthened by a plate 27 located thereupon and riveted at its edges to said draft sills and the flanges of the I-beam center girder.

Various other changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope.

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is,—

1. In a car underframe, the combination with an I-beam center girder, transverse members, and draft sills connected with said I-beam center girder, of furring strips rigidly secured to the upper flanges of the I-beam center girder, and other strips or sills

supported upon the transverse members and cooperating with said furring strips for supporting the car floor.

2. In a car underframe, the combination with an I-beam center girder and draft sills, of a U-shaped plate secured between the draft sills and angle irons secured directly to said U-shaped plate and directly to the web of I-beam center girder.

3. In a car underframe, the combination with an I-beam center girder and draft sills spaced apart, of a plate secured to said draft sills and to the upper flanges of said I-beam center girder and having depending flanges at its edges.

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

ANTON BECKER.

Witnesses:

MARIE RYAN,
E. S. CULVER.