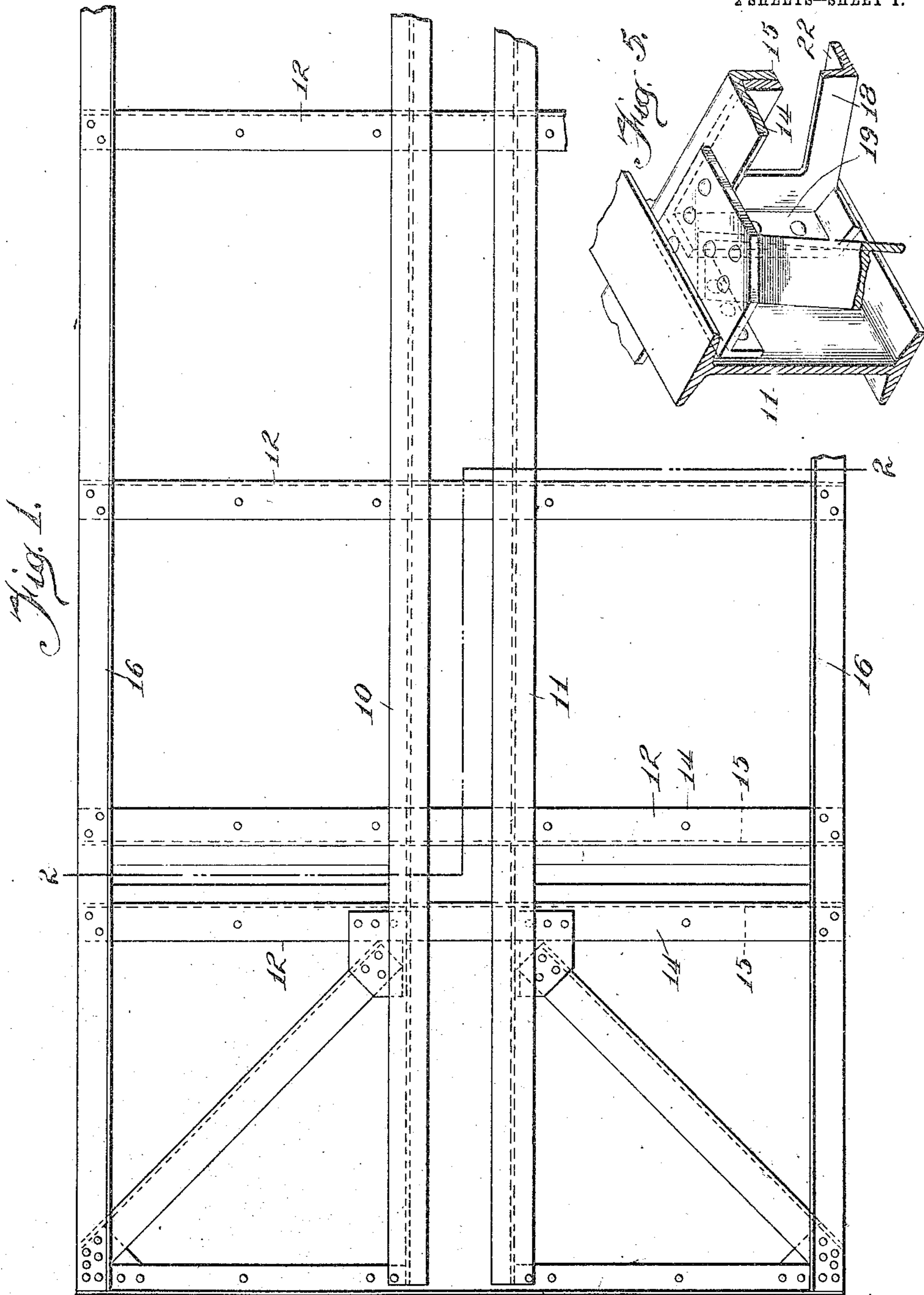


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METAL UNDERFRAMING FOR CARS.  
APPLICATION FILED JAN. 10, 1910.

965,934.

Patented Aug. 2, 1910

2 SHEETS—SHEET 1.



Witnesses  
Milton Lenoir  
E. M. Klatcher

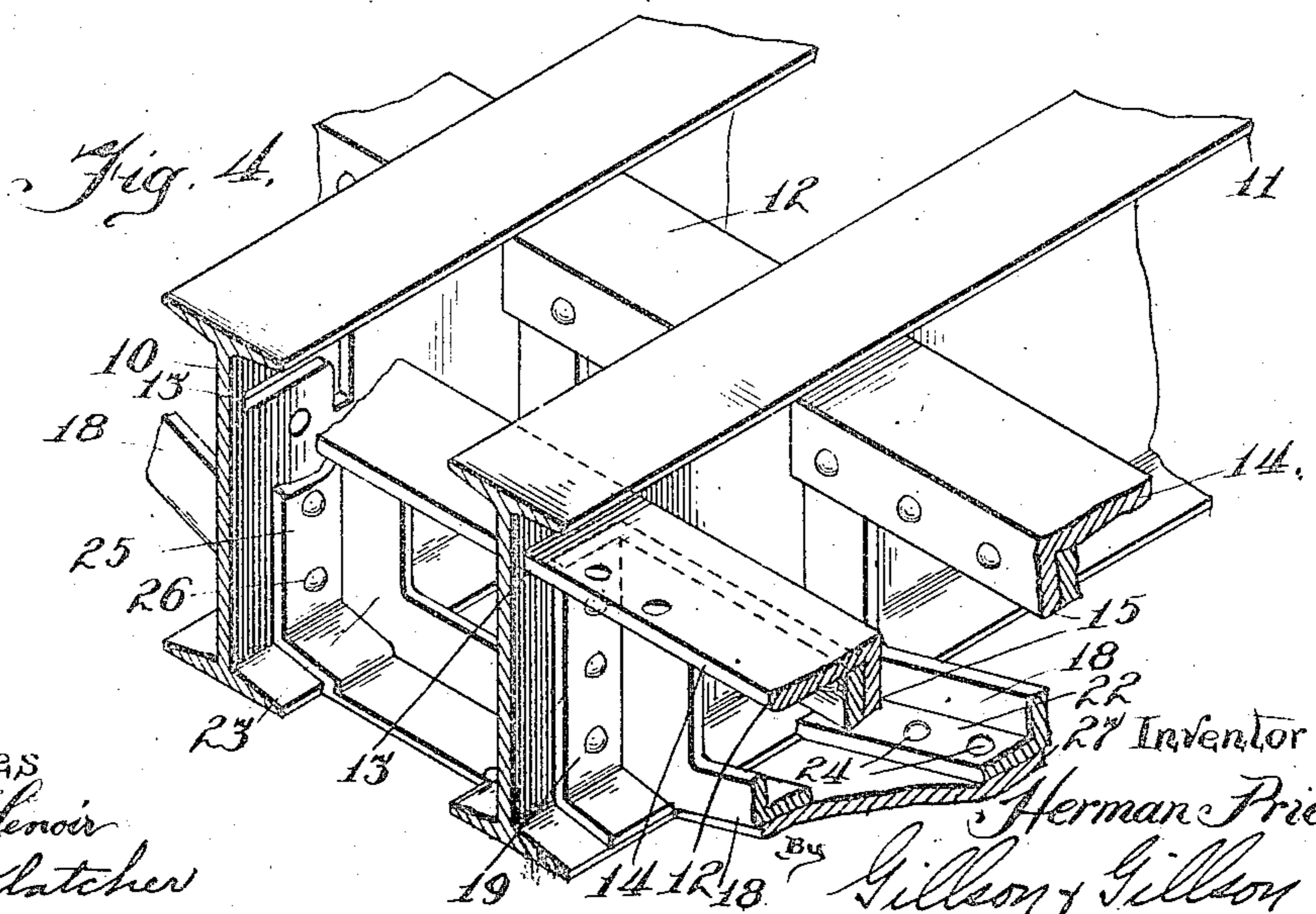
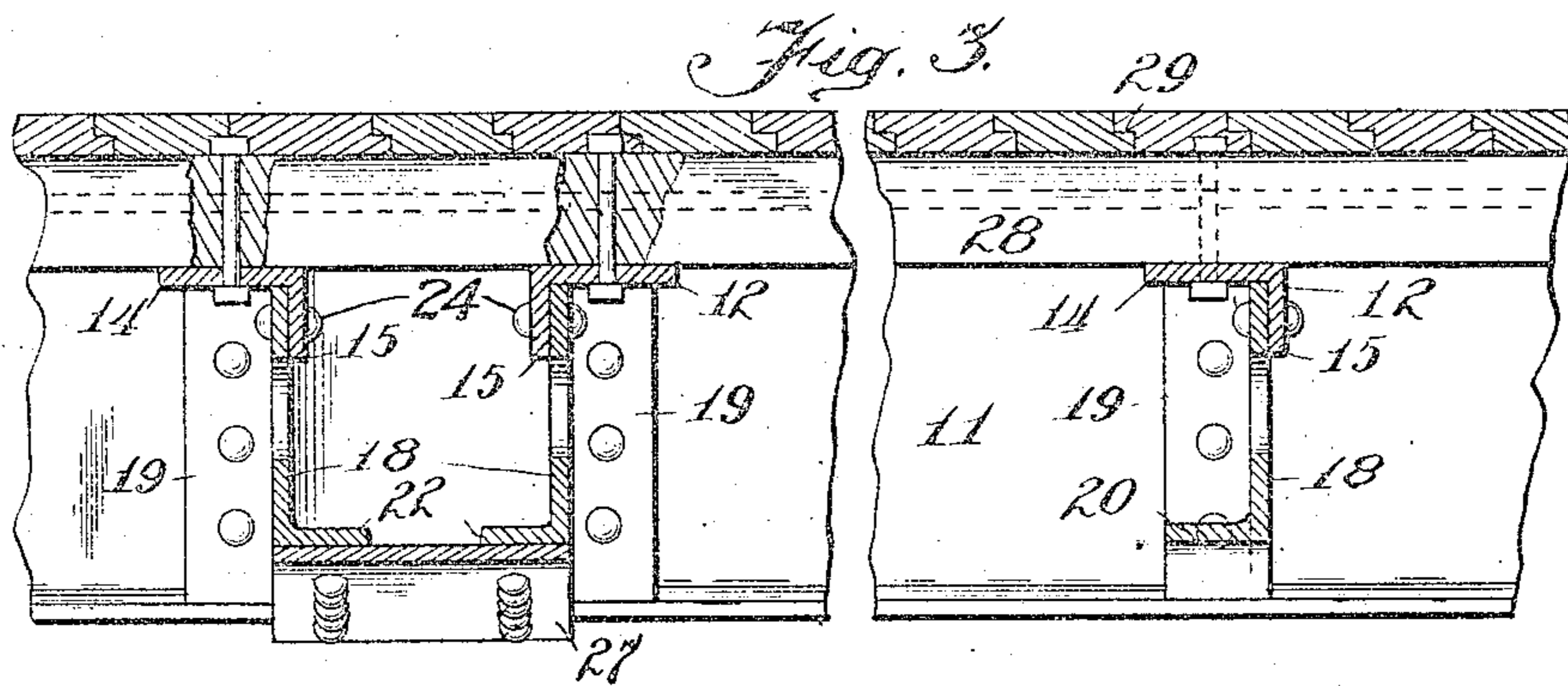
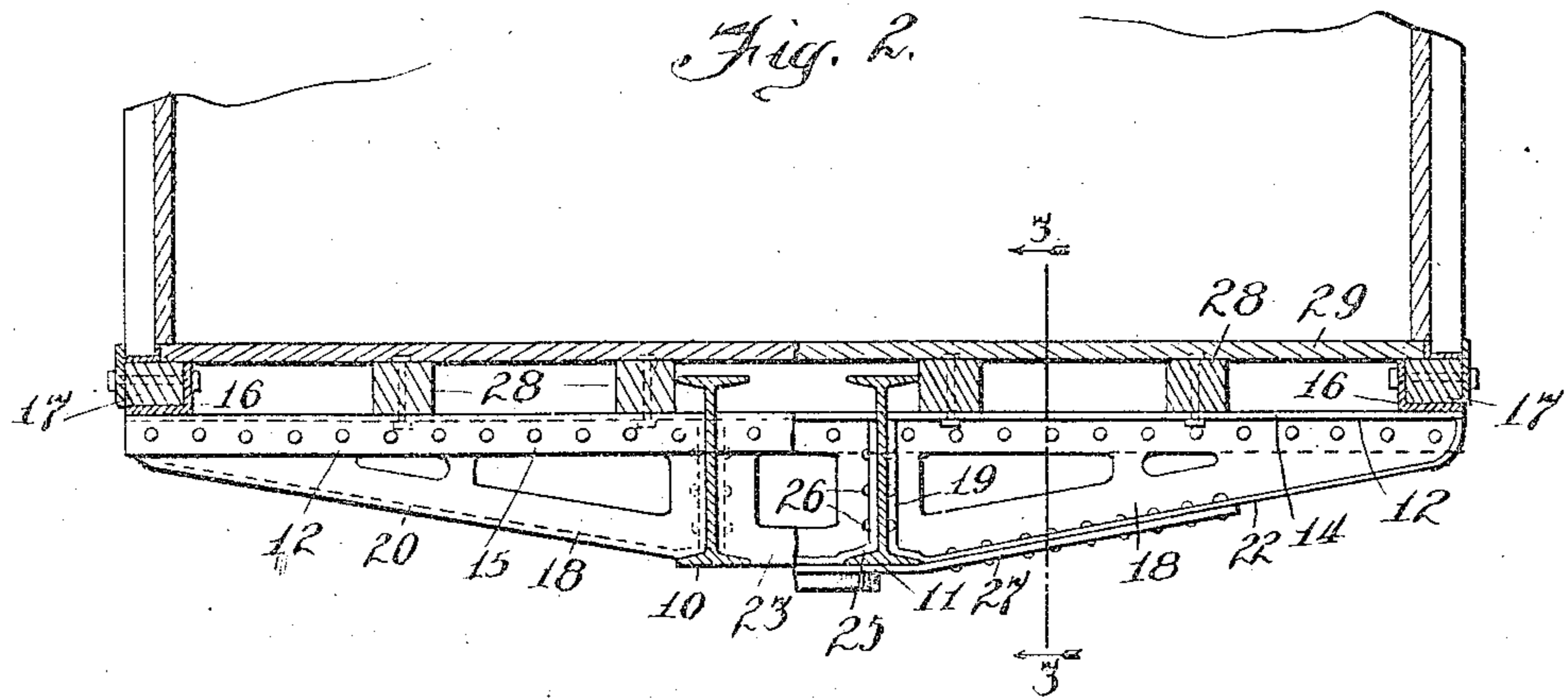
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# UNITED STATES PATENT OFFICE.

HERMAN PRIES, OF MICHIGAN CITY, INDIANA.

## METAL UNDERFRAMING FOR CARS.

965,934.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed January 10, 1910. Serial No. 537,220.

*To all whom it may concern:*

Be it known that I, HERMAN PRIES, a citizen of the United States, and resident of Michigan City, county of Laporte, and State of Indiana, have invented certain new and useful Improvements in Metal Underframing for Cars, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to improvements in metal under-framing for cars and is of that type in which the load is transmitted to a pair of longitudinal sills arranged adjacent the median line of the car, these sills carrying frame-work projecting outwardly to and carrying the side sills.

The objects of the invention are to provide a simple form of construction yet one having great strength in that the bolts or rivets, by means of which the parts are secured together, are largely relieved from carrying stresses; the invention consisting in a structure as is hereinafter described and is illustrated in the accompanying drawings, in which—

Figure 1 is a detail plan view of the under framing of the car; Fig. 2 is a detail sectional view on the line 2—2 of Fig. 1; Fig. 3 is a detail sectional view on the line 3—3 of Fig. 2; Fig. 4 is a detail of the under-framing in perspective, showing a portion of the body bolster; and Fig. 5 is a detail in perspective, showing the juncture of one of the center sills with a bolster and an angle brace.

The main or center sills are shown at 10, 11, and are in the form of I-beams and extend from end to end of the car, being located adjacent to and one upon each side of the median line of the car. The cross sills are in the form of angle bars, as shown at 12, and project through suitable openings, as 13, in the webs of the sills 10, 11, one flange 14, of the cross sill, being horizontal, the other flange 15 projecting downwardly therefrom. The side sills 16 are also in the form of angle bars, resting upon the cross sills at their outer ends, the angle being outwardly directed, and a nailing strip 17 being seated within this angle and securely bolted to the sill. A filling and supporting bracket 18, preferably a malleable casting, is seated against the outer face of the web of the center sill and upon its outer foot flange and engages and supports the cross sill from the

center sill to its outer end, the upper edge of this bracket bearing against the horizontal flange of the cross sill and lying against and being riveted to the vertical flange 15.

At the inner end of the bracket there is a flange 19, through which rivets are passed to secure it to the web of the center sill, and at its lower edge the bracket is provided with a lateral strengthening flange 20. The above specific construction of the cross sill applies to the sills intermediate of the body bolsters. These bolsters comprise a pair of such sills differing, however, from the intermediate sills in that the bottom flanges 22 of the bracket members project in opposite directions or toward the median line of the bolster. These bolsters further comprise filler plates 23 located between the center sills and conforming to the contour thereof, one of such plates being associated with each of the cross sills forming a part of the bolster and being riveted to the pendent flanges thereof, as shown at 24. Each of these filler plates having lateral flanges 25, which give added strength and afford means of attachment to the webs of the longitudinal sills by means of rivets, are shown at 26. A tie plate 27 is applied to the under face of the bolster and is riveted to the lateral flange of the supporting brackets and to the flanges 25 of the filler plates 23. The usual floor-carrying strips 28 are applied to the upper faces of the cross sills, and to these the floor 29 of the car is nailed.

The brackets 18 constitute chairs upon which the outer ends of the cross sills are seated and through which the load is transmitted to the center sills, the rivets attaching these brackets to the cross sills being located below the upper flanges of the latter, are largely relieved from the sheering stresses incident to the tendency of these sills to bend downwardly.

I claim as my invention:—

1. In metal under-framing for cars, in combination, a longitudinal sill having an outstanding bottom flange, an angle bar perpendicular to and extending through the sill, its flanges being horizontally and vertically disposed, and a plate fitting within the angle of the sill and bearing against the under face of the horizontal flange of the angle bar and being secured to the vertical flange thereof.

2. In metal under-framing for cars, in

combination, a longitudinal sill having an  
 outstanding bottom flange, an angle bar  
 perpendicular to the sill and extending  
 through the web thereof, one of its flanges  
 being horizontal and the other depending  
 therefrom, and a plate fitting within the  
 angle of the sill and bearing against the  
 under face of the horizontal flange of the  
 angle bar and being secured to the pendent  
 flange thereof.

3. In metal under-framing for cars, in  
 combination, a pair of longitudinal sills ad-  
 jacent the median line of the car, each sill  
 having an outstanding bottom flange, a pair  
 of angle bars spaced apart and passing  
 through the webs of the center sills, one  
 flange of each angle bar being pendent, sup-  
 porting brackets extending outwardly from  
 the center sills and being seated against the  
 web and foot flange thereof, the upper edges  
 of such brackets bearing against the lower

face of the horizontal flange of the angle  
 bar and the side face of the pendent flange  
 thereof and being secured thereto by means  
 of rivets, and a filler interposed between  
 the center sills.

4. In metal under-framing for cars, in  
 combination, a pair of center sills in the  
 form of I-beams, a plurality of angle bars  
 passing through the webs of the sills, each  
 of such bars having one of its flanges hori-  
 zontal and the other pendent, a pair of sup-  
 porting brackets being seated against the  
 outer faces of the webs and bottom flanges  
 of the sills and engaging the horizontal  
 flange of the angle bar and being riveted to  
 the vertical flange thereof.

HERMAN PRIES.

Witnesses:

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