

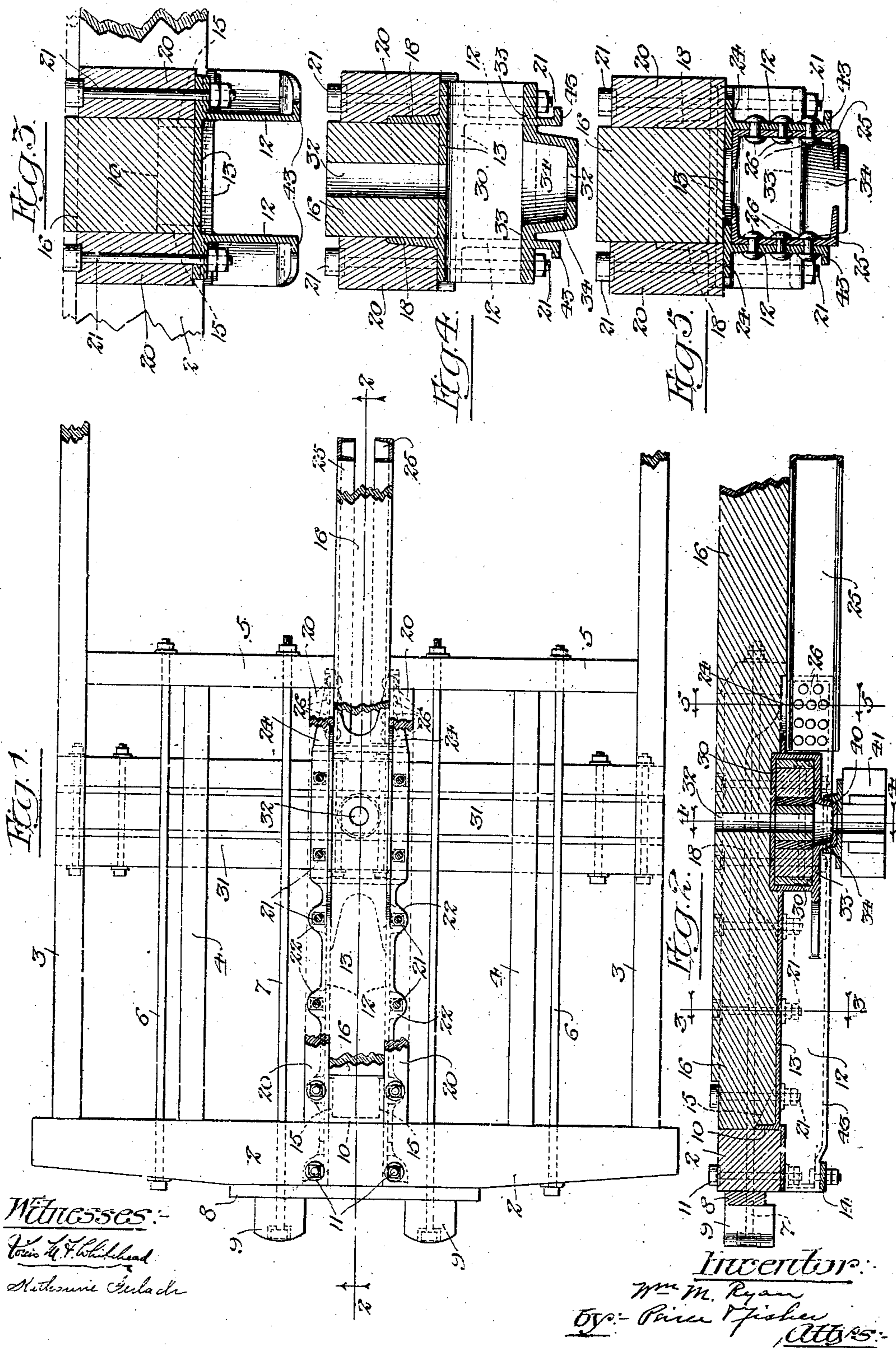
No. 891,375.

PATENTED JUNE 23, 1908.

W. M. RYAN.  
RAILWAY CAR.

APPLICATION FILED JAN. 29, 1908.

2 SHEETS—SHEET 1.



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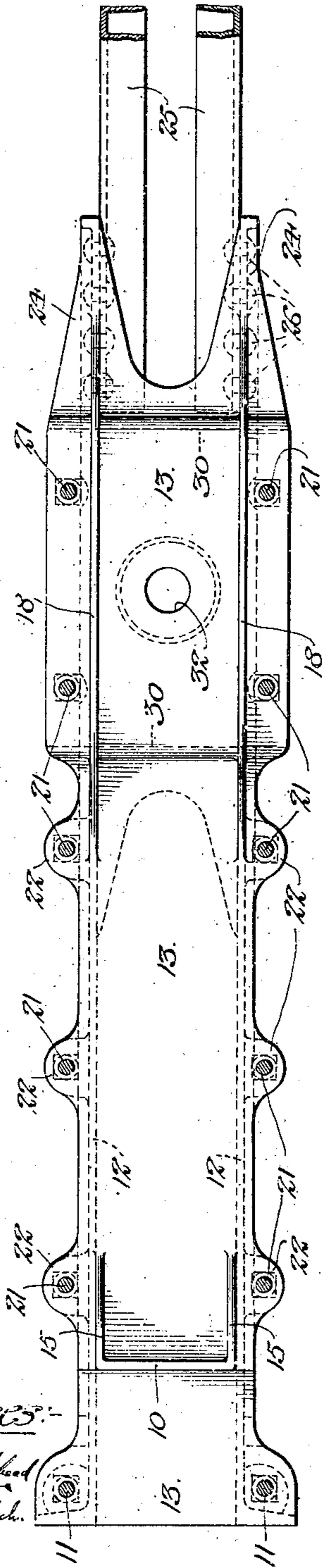
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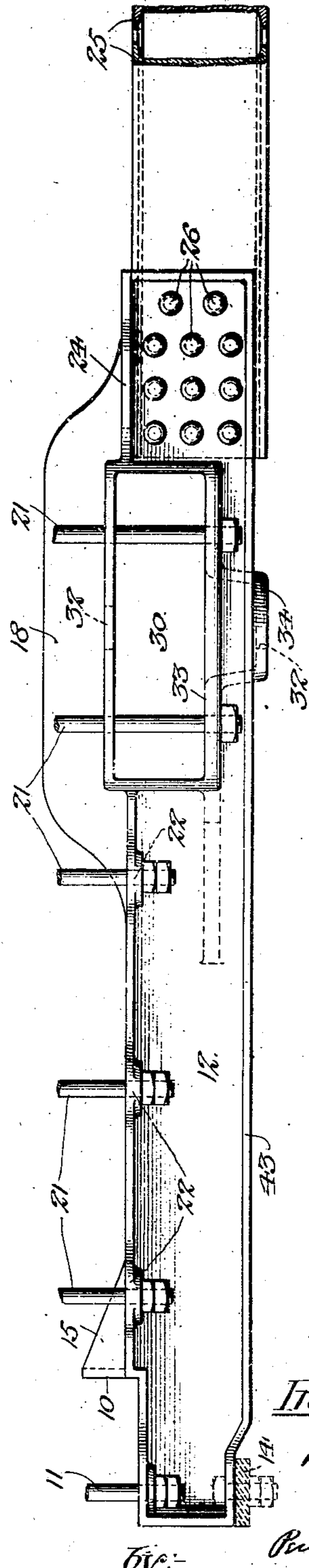
2 SHEETS—SHEET 2.

Fig. 6.



Witnesses:  
J. H. Whitehead  
Hermann Eulach.

Fig. 7.



Inventor:  
W. M. Ryan

By: Paul Fisher  
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# UNITED STATES PATENT OFFICE

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## RAILWAY-CAR.

No. 891,375.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed January 29, 1908. Serial No. 413,185.

*To all whom it may concern:*

Be it known that I, WILLIAM M. RYAN, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Railway-Cars, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part 10 of this specification.

This invention has for its object to provide improved means for strengthening the under-frame of wooden railway cars, and the invention consists in the features of novelty hereinafter described, illustrated in the accompanying drawings and particularly pointed out in the claims at the end of this specification.

Figure 1 is a plan view of the under-frame 20 of a railway car having my invention applied thereto, parts being broken away for better illustration. Fig. 2 is a view in vertical section on line 2—2 of Fig. 1. Fig. 3 is a view in section on line 3—3 of Fig. 2. Fig. 4 is a 25 view in section on line 4—4 of Fig. 2. Fig. 5 is a view in section on line 5—5 of Fig. 2. Fig. 6 is a detail plan view of my improved draft sill, with thrust beams connected thereto at its inner end. Fig. 7 is a view in 30 side elevation of the parts shown in Fig. 6.

The under-frame of the car illustrated in Fig. 1 is shown as provided with the end cross sill 2, with outside longitudinal sills 3, with the intermediate sills 4 and with the inner 35 cross sill 5, and, as shown, there are tie rods 6 and 7 connecting the end sill 2 and the cross sill 5. The outer ends of the tie rods 7 are shown as projecting beyond the cross sill 2 and through a plate 8 on the outer face 40 thereof and as carrying the buffer heads 9.

Beneath the end sill 2 is set my improved draft sill that consists of a single metal casting, and this draft sill is formed upon its upper surface with a rib or shoulder 10 45 against which will bear the rear face of the cross-sill 2. The cross-sill 2 is shown as attached, by through bolts 11, to the flanges that project laterally from the front end of the draft sill at its top. The front end of the 50 draft sill terminates preferably in line with the outer face of the cross sill 2. My improved draft sill is provided with the depending side walls 12 and with the top plate 13 forming a chamber to receive the stem or 55 shank of the coupling that will rest upon the

plate 14 that extends between the side walls 12 at their front end.

From the top of my improved draft sill, adjacent its front end, rise the ribs or flanges 15 (see Figs. 6 and 7) that connect with the 60 raised shoulder or flange 10, these parts forming a pocket to receive the forward end of a wooden beam 16 that extends over and rests upon the top of the draft sill. From the rear 65 portion of the top plate of the draft sill rise the flanges 18 between which the beam 16 also extends. As shown, there are side beams 20 extending alongside the beam 16, these side beams resting upon the top of the 70 draft sill outside the raised ribs or flanges 15 and 18, and these beams 20 are held in place by through bolts 21 that pass through the beams 20 and through laterally projecting 75 flanges 22 that extend from the top of the draft sill.

The rear end of my improved draft sill is shown as provided with rear extensions 24 between which are set the channel shaped thrust beams 25, these thrust beams 25 being 80 securely riveted as at 26 to the side walls of the rear extensions 24. It will be understood, of course, that the thrust beams 25 and, as well, also, the beams 16 and 20, will extend to the opposite end of the car where 85 they will be connected to a draft sill similar to that above described and illustrated in the drawings.

The rear portion of my improved draft sill is provided with a transverse opening 30 to 90 receive a bolster 31 that is connected to the under-frame of the car. As shown, the bolster 31 is composed of a plurality of wooden and metal beams securely bolted together, the center beam of the bolster, as well as the beam 16, being provided with a 95 hole 32 to receive the usual king-bolt of the car. The bottom, top and end walls, forming the opening 30 of the draft sill, are integral with the body of the sill, and the bottom plate 33 of the opening 30 is formed 100 with a circular depending portion 34 that is perforated to permit the passage thereof through of the king-bolt. This circular depending portion 34 of the draft sill serves as a center plate which sets within the raised circular portion of a center plate bearing 40 that 105 is secured upon the truck beam 41. As shown, the center plate bearing 40 and truck beam 41 are perforated to receive the king-bolt. The underside of my improved 110

draft sill is formed with depending flanges 43 which extend at each side of the circular depressed portion 34 (see Fig. 4), these flanges 43 serving to more securely hold the depending annular portion 34 of the draft sill in engagement with the raised circular portion of the center plate bearing 40.

By forming the draft sill with a transverse opening to receive the bolster, said transverse opening having a bottom plate formed integral therewith and adapted to serve as a center plate, a much more effective and durable construction of draft sill is provided, as the strains and thrusts upon the draft sill are transmitted directly to the center plate bearing 40 on top of the truck beam 41.

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

1. The combination with the under-frame of a car, of a metallic draft sill having its rear end provided with a transverse opening to receive a bolster, said opening having a bottom plate formed integral with the body of the draft sill and serving as a center plate.

2. The combination with the under-frame of a car, of a metallic draft sill having its rear end provided with a transverse opening to receive a bolster, said opening having a bot-

tom plate formed with a circular depending and perforated portion integral with the body of the sill and serving as a center plate.

3. The combination with the under-frame of a car, of a metallic draft sill having its rear end provided with a transverse opening to receive a bolster, said opening having a bottom plate formed with a circular depending and perforated portion integral with the body of the sill and serving as a center plate, said bottom plate being also formed with flanges depending at the sides of said circular portion, and a center plate bearing having a raised annular flange extending between said circular portion of the draft sill and the flanges at the sides thereof.

4. The combination with the under-frame of a car, of a metallic draft sill having its rear end provided with a transverse opening to receive a bolster, said opening having a bottom plate formed integral with the body of the draft sill, said draft sill having rearwardly projecting flanges to which thrust beams may be secured.

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Witnesses:

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