

G. A. JOHNSON.
STEEL PLATFORM FOR RAILWAY CARS.
APPLICATION FILED SEPT. 1, 1911.

1,011,965.

Patented Dec. 19, 1911.

3 SHEETS-SHEET 1.

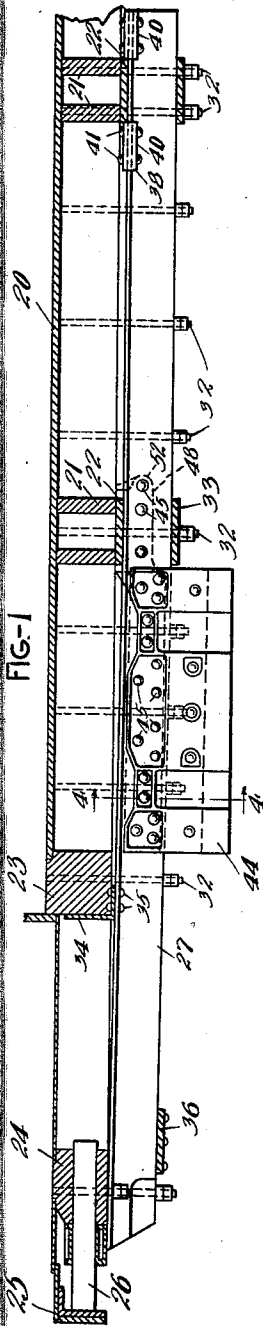


FIG-1

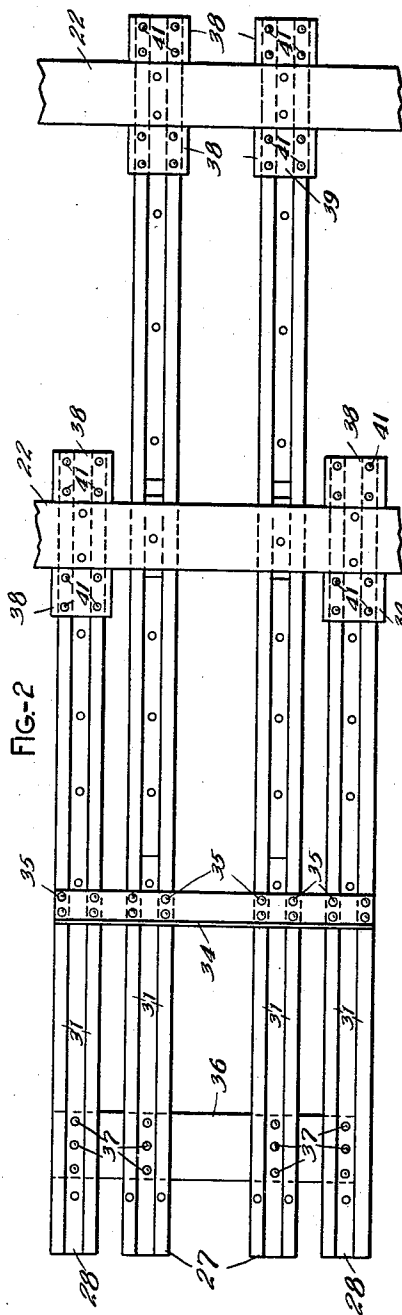


FIG-2

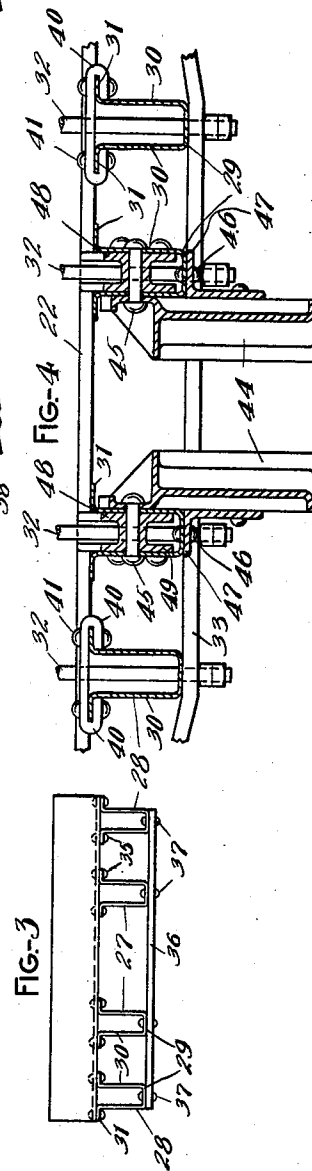


FIG-3

WITNESSES:
Calvin B. Patch
Wm. Guier

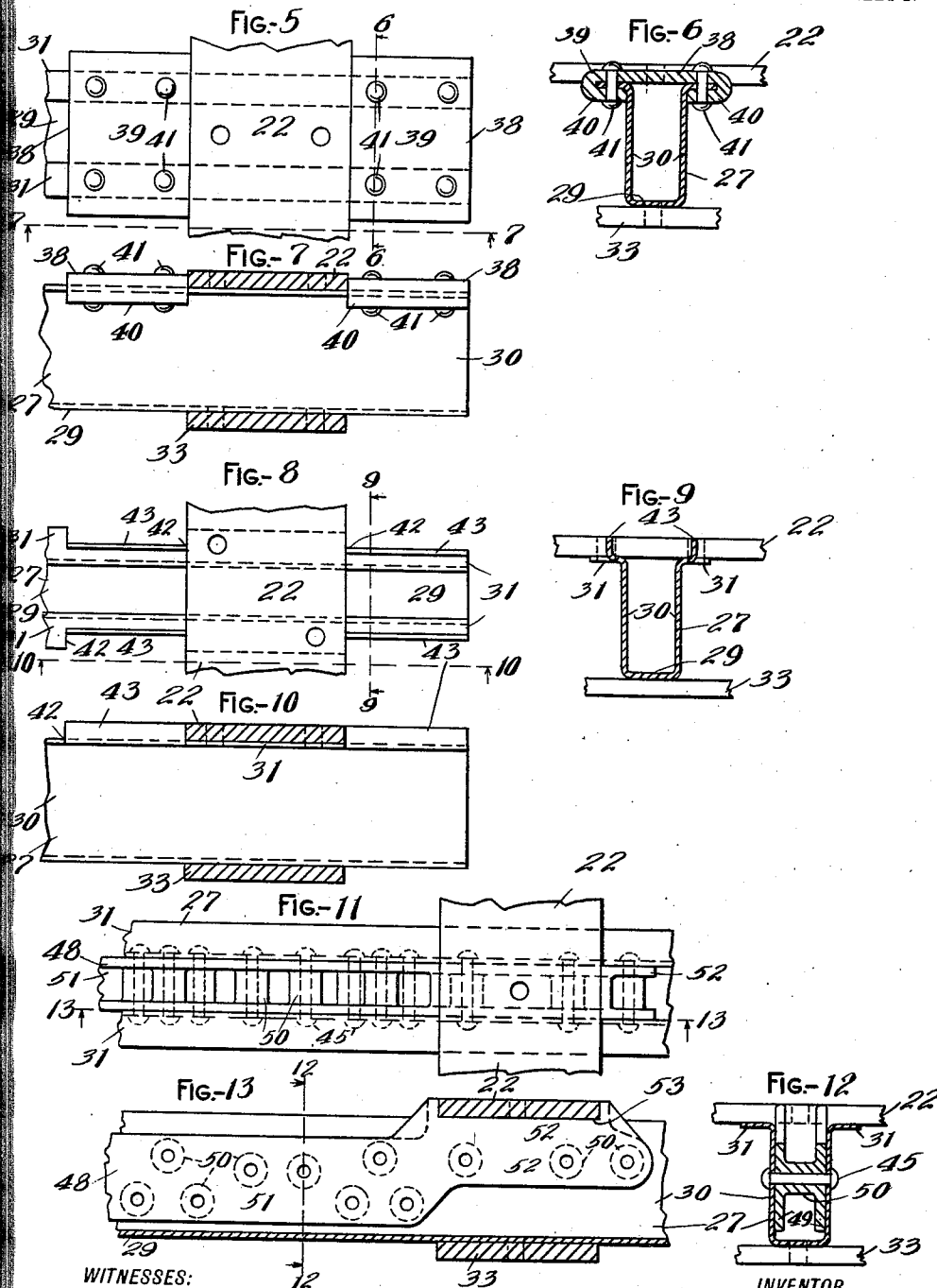
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WITNESSES:

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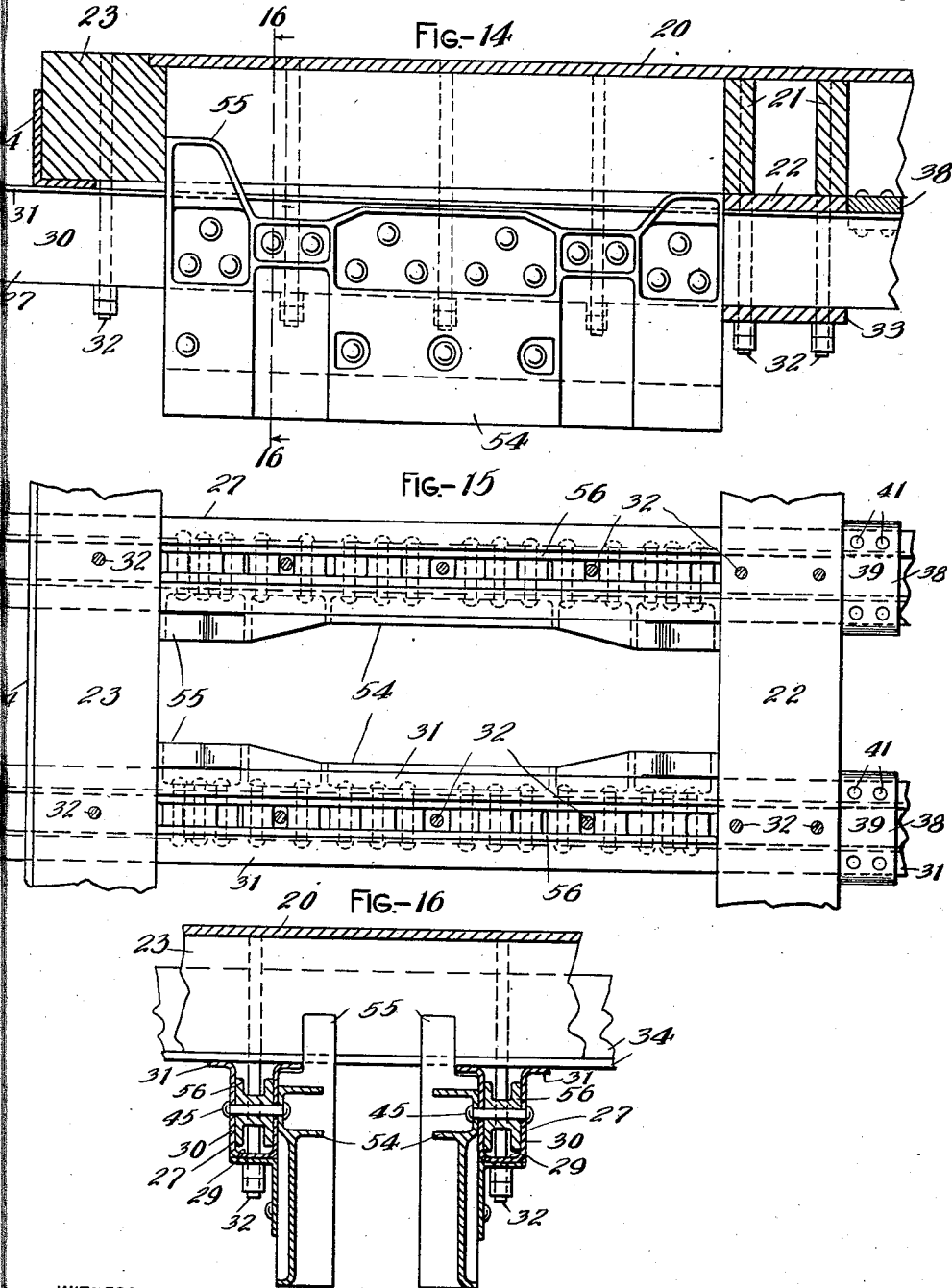
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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STEEL PLATFORM FOR RAILWAY-CARS.

1,011,555.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed September 1, 1911. Serial No. 647,222.

To all whom it may concern:

Be it known that I, GEORGE A. JOHNSON, a citizen of the United States, residing in Chicago in the county of Cook and State of Illinois, have invented a new and useful Improvement in Steel Platforms for Railway-Cars, of which the following is a specification.

This invention relates to improvements in steel platforms for railway passenger cars.

The object of my invention is to provide a new and improved steel platform construction used generally on passenger cars, which consists in making the longitudinal beams of U shaped cross section, made from either pressed or rolled steel, said beams having at their upper edges outwardly turned integral formed securing flanges.

My invention further consists in providing a new and improved construction, and furthermore in providing a new form of filler block to be used in the beams at the place where the stop castings are attached thereto, and which filler blocks are also provided with means for preventing longitudinal displacement of the same relative to the cross members of the car platform.

My invention further consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described and more particularly specified in the claims.

In the accompanying drawings forming a part of this specification, Figure 1 is a longitudinal vertical section of a portion of a car platform showing my improved construction applied thereto. Fig. 2 is a plan view of the lower portion of the platform only, the cross sills and car floor and the other superstructure being omitted. Fig. 3 is an end elevation of the structure shown in Fig. 2. Fig. 4 is an enlarged, detail, partial, transverse section taken substantially on the line 4—4 of Fig. 1. Fig. 5 is a detail plan view, showing one form of anchoring plates and the method of attaching the same to one of the U shaped beams. Fig. 6 is a transverse section taken on the line 6—6 of Fig. 5. Fig. 7 is a longitudinal section of the structure shown in Fig. 5, taken on the line 7—7 of Fig. 5. Fig. 8 shows a plan view of another form of anchoring means. Fig. 9 is a transverse section of the structure shown in Fig. 8, taken on the line 9—9 of Fig. 8. Fig.

10 is a longitudinal section, taken on the line 10—10 of Fig. 8. Fig. 11 is an enlarged detail, partial plan view, showing the filler block. Fig. 12 is a transverse section, taken on the line 12—12 of Fig. 13. Fig. 13 is a longitudinal section of the structure shown in Fig. 11, taken on the line 13—13 of Fig. 11. Fig. 14 is an enlarged, longitudinal section, showing another form of stop castings as applied to the U shaped beams. Fig. 15 is a top plan view of the structure shown in Fig. 14. Fig. 16 is a transverse section, taken on the line 16—16 of Fig. 14.

In the drawings, 20 represents the floor of a passenger car platform structure, 21 the cross sills, each having on their lower face, preferably, a steel wearing plate 22.

23 denotes the end sill, 24 the vestibule end sill, 25 the buffer plate and 26 the buffer stem.

As shown in the drawings, I prefer to use four parallel U shaped metal beams, the inner pair 27 of which are longer than the outer pair 28. Each of these U shaped beams preferably consists of a bottom portion 29, side portions 30 and outwardly turned securing flanges 31 at the upper edges of the side portions 30. These beams are secured to the cross sills by means of sill bolts 32 which extend through the bottom portion 29 of each of the beams, and in some places where tie-plates 33 are used, through the tie-plates and the U shaped members. To more firmly secure the members in position, there is provided at the end of the platform proper an angle plate 34 secured to the U shaped members 27 and 28 by rivets 35 extending through the angle plate and the securing flanges of the beams. An additional tie-plate or brace member 36 is provided under the vestibule platform and is secured to the members 27 and 28 by rivets 37, passing through the lower portion 29 of each of the U shaped members. In order to prevent longitudinal movement of the beams due to any pull or pushing action transmitted to the same, I provide each of the members 27 and 28 with anchoring plates 38. As more clearly shown in Figs. 5, 6 and 7, these anchoring plates 38 consist of a horizontal portion 39, extending across both of the securing flanges of each of the U shaped members and hook portions 40 formed integral with the portion 39 and adapted to fit over and slide on the securing flanges 31 of the

beam. These anchoring plates I place immediately adjacent and on each side of, the steel plates 22 on the lower portion of the cross sills 21. Each of the anchoring plates 38 is securely fastened to the beams by rivets 41.

Instead of using the plates 38, I may use the structure shown in Figs. 8, 9 and 10, in which I slit the flange portions 31 of the beams at points 42 spaced apart equal to the width of the cross sill, and turn such slotted portions 43 of the flange at each side of the cross sill upwardly and thus form an anchoring means integral with the beams.

Those portions of the securing flanges 31 immediately beneath the cross sills are secured to the cross sills by means of rivets or bolts. The intermediate members 27 have attached thereto draft rigging stop-castings 44 secured thereto by rivets 45 and 46, the latter passing through angle portions 47 of the stop castings 44 and the lower portions 29 of the members 27. The rivets 45 pass transversely through each of the side portions 30 of the beams 27 and through a filler block 48 located in each of the U shaped members 27. As more particularly shown in Figs. 11, 12 and 13, these filler blocks 48 each comprises two parallel, vertical side portions 49, connected by a plurality of transverse, cylindrical, cored hubs 50, these hubs being suitably spaced so as to coincide with the rivet holes in the stop castings 44, the rivets being adapted to pass therethrough. The side members 49 each consists of a lower, horizontal portion 51 and an upper portion 52 parallel to, but offset from, the portion 51. Each of the portions 52 is provided with a cut out recess 53 adapted to closely fit the cross sill 21. In this manner I provide means for preventing the longitudinal displacement of the filler blocks 48 and thus make a solid structure to which the stop castings may be secured.

In Figs. 14, 15 and 16 is shown another form of stop castings 54, each of which is provided at its forward upper edge with an abutment 55 through which the strain on the stop castings is transmitted to the end sill 23. In this particular structure the filler blocks 56 do not have the anchoring means shown on the filler blocks 48. But the beams 27 are provided with anchoring plates 38 on the rear side of the adjacent cross-sill.

Various changes may be made in the details of construction of my improved steel platform, and I do not wish to be limited to the exact details shown in the drawings, except as defined in the claims.

I claim:—

1. A steel platform for railway passenger cars consisting of an inner and an outer pair of beams, U shaped in cross section, having upper, outwardly turned securing

flanges abutting against the lower faces of the cross sills of the car frame, and connected together and braced by tie-plates secured to the bottoms of the U shaped beams by sill bolts passing through the plates and the beams, substantially as specified.

2. A steel platform for railway passenger cars, consisting of an inner and an outer pair of beams, U shaped in cross section, having upper, outwardly turned securing flanges secured to the end sill angle iron and abutting against the lower faces of the cross sills, of the car frame, and anchoring means on said flanges adjacent each side of the cross sills to prevent longitudinal movement of the beams, said beams being connected together and braced by tie-plates secured to the bottoms thereof, substantially as specified.

3. A steel platform for railway passenger cars consisting of an inner and an outer pair of beams, U shaped in cross section, and having upper, outwardly turned securing flanges secured to the cross sills of the car frame and anchoring plates at the ends of the beams, said plates being separated the width of the cross sills of the car frame and adjacent each side thereof, said plates each having inwardly turned hook portions at each edge fitting over and secured to the flanges of the beams to prevent longitudinal movement of the latter, substantially as specified.

4. The combination of U shaped metal beams provided with upper, outwardly turned securing flanges and anchoring plates having inwardly turned hook portions fitting over the beam flanges and riveted thereto, substantially as specified.

5. In a steel platform passenger car construction, the combination with U shaped metal beams, of space or filler blocks located therein, each block composed of two side portions connected by a plurality of short, cylindrical hubs, said hubs being each provided with a hole through which the securing rivets are adapted to pass, substantially as specified.

6. In a steel platform car construction, the combination with end and cross sills and platform members, of longitudinally arranged metal beams, U shaped in cross section, having upper, outwardly turned securing flanges, of means on said flanges separated the width of the cross sills and on each side thereof to prevent longitudinal movement of the beams, substantially as specified.

7. In a steel car platform construction, the combination of parallel U shaped metal beams, filler blocks located therein, stop plates attached to said beams by means of rivets passing through the stop plates, beams and filler blocks, and spaced anchoring means on the ends of the beams to pre-

vent longitudinal movement thereof, substantially as specified.

8. In a steel car platform construction, the combination with U shaped metal beams, having upper, outwardly turned securing flanges and anchoring plates at the ends of the beams having inwardly turned hook portions fitting over and secured to said flanges and located adjacent each side of the cross sill, and filler blocks located within the beams, each block being composed of vertical side portions connected by cored hubs, and side portions furthermore having a recessed portion adapted to fit the cross sills to prevent longitudinal movement of the blocks, substantially as specified.

9. In a steel car frame structure, the combination of parallel metal beams, U shaped in cross section, having upper, outwardly turned securing flanges, filler blocks located within the beams, said filler blocks being each composed of vertical side portions and a plurality of transverse hubs connecting the beams, stop castings, tie-plates and anchoring means on the ends of each of the beams substantially as specified.

10. In a steel car-platform construction, the combination with a pair of longitudinally arranged U shaped beams, of stop castings attached thereto and filler blocks located within said beams adjacent said stop castings, said blocks having integrally formed therewith means for engaging a

cross sill for preventing longitudinal movement of the blocks, beams and stop castings, substantially as specified.

11. In a steel platform car construction, the combination with longitudinally arranged U shaped metal beams having upper outwardly turned securing flanges thereon, and provided with anchoring means at the ends thereof engaging a cross sill to prevent longitudinal movement of the beams, of stop castings attached to the beams and filler blocks located within the U shaped beams adjacent each stop casting, said blocks also having additional anchoring means engaging a cross sill to prevent longitudinal movement of the beams, stop castings and blocks substantially as specified.

12. In a steel platform car construction, the combination with an inner and an outer pair of parallel U shaped metal beams, of stop castings attached to the inner pair of said beams, anchoring means at the end of each of the beams engaging cross sills, and filler blocks located within the inner pair of beams and adjacent the stop castings, said blocks each having a recessed portion adapted to fit a cross sill and to prevent longitudinal movement of the beams, substantially as specified.

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Witnesses:

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EDWARD S. EVARTS.