

No. 842,871.

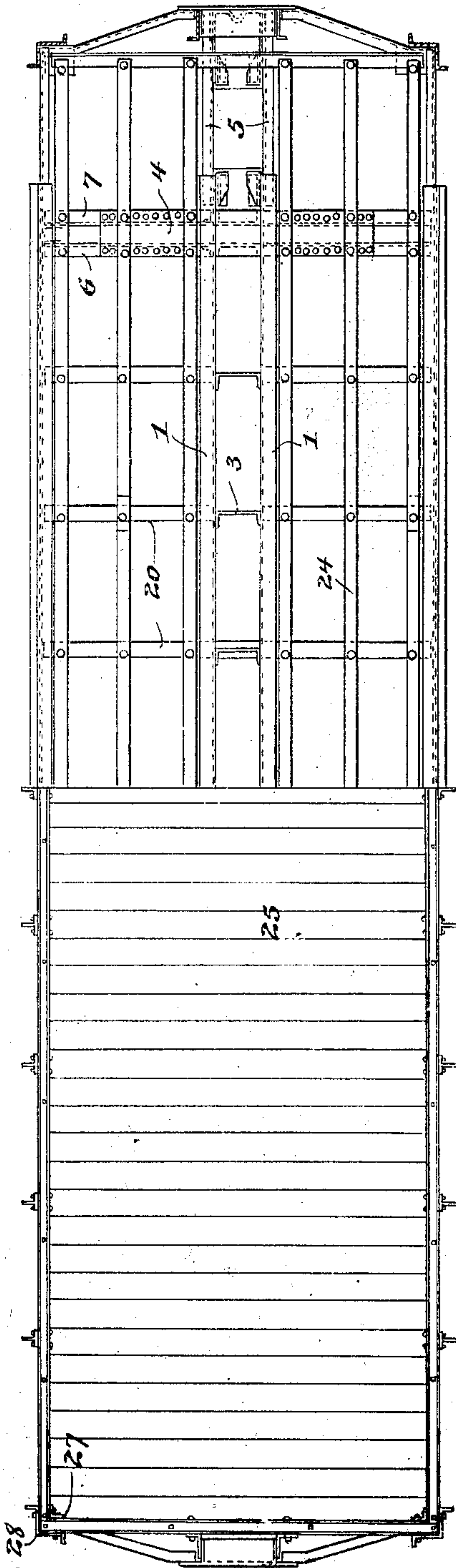
PATENTED FEB. 5, 1907.

E. I. DODDS.  
GONDOLA CAR.

APPLICATION FILED JULY 24, 1905.

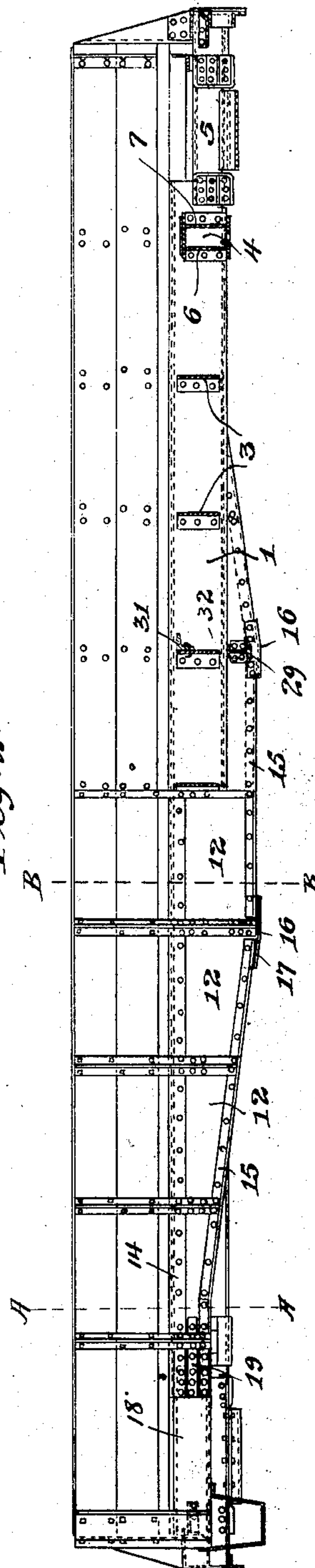
2 SHEETS—SHEET 1.

Fig. 1.



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Fig. 2.



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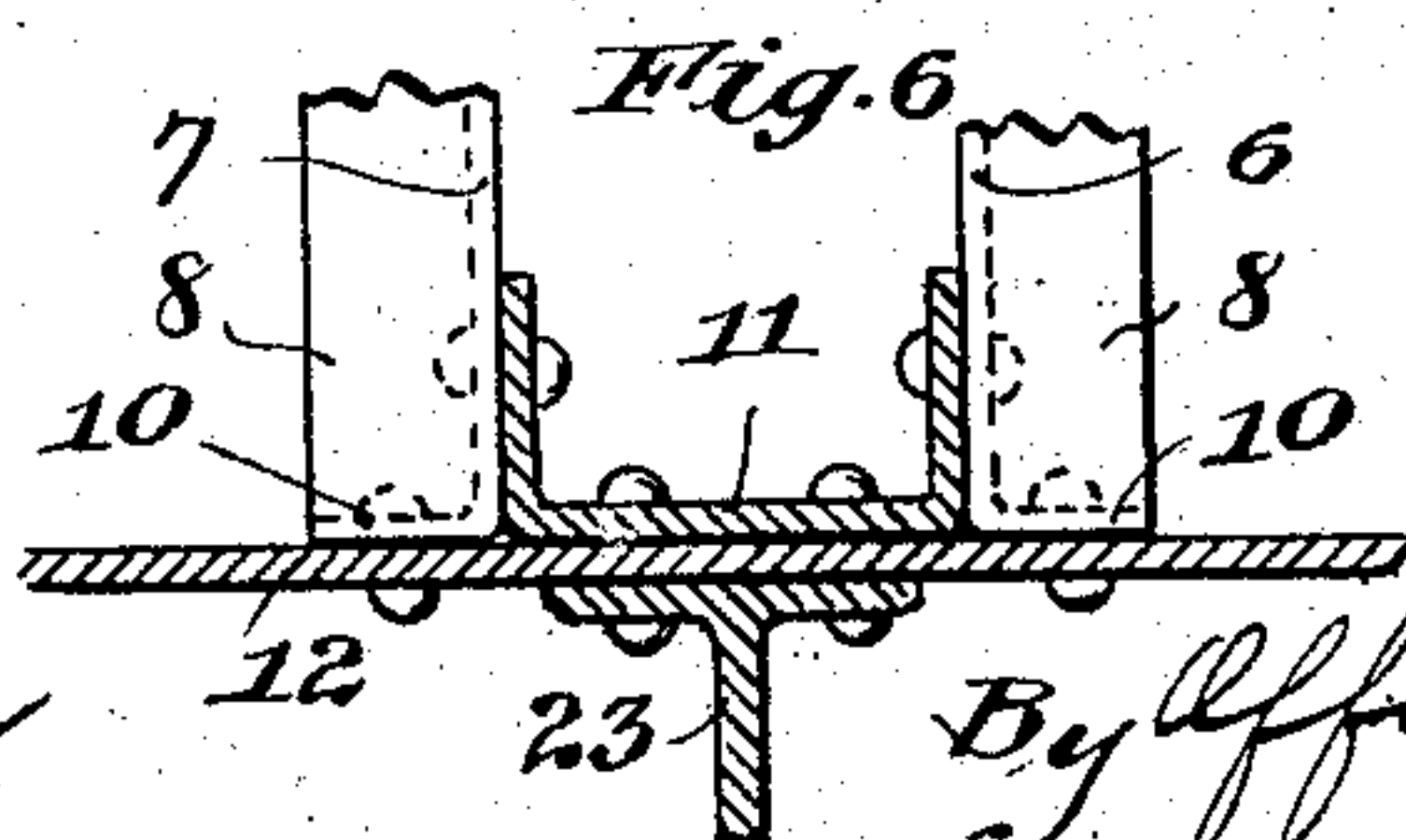
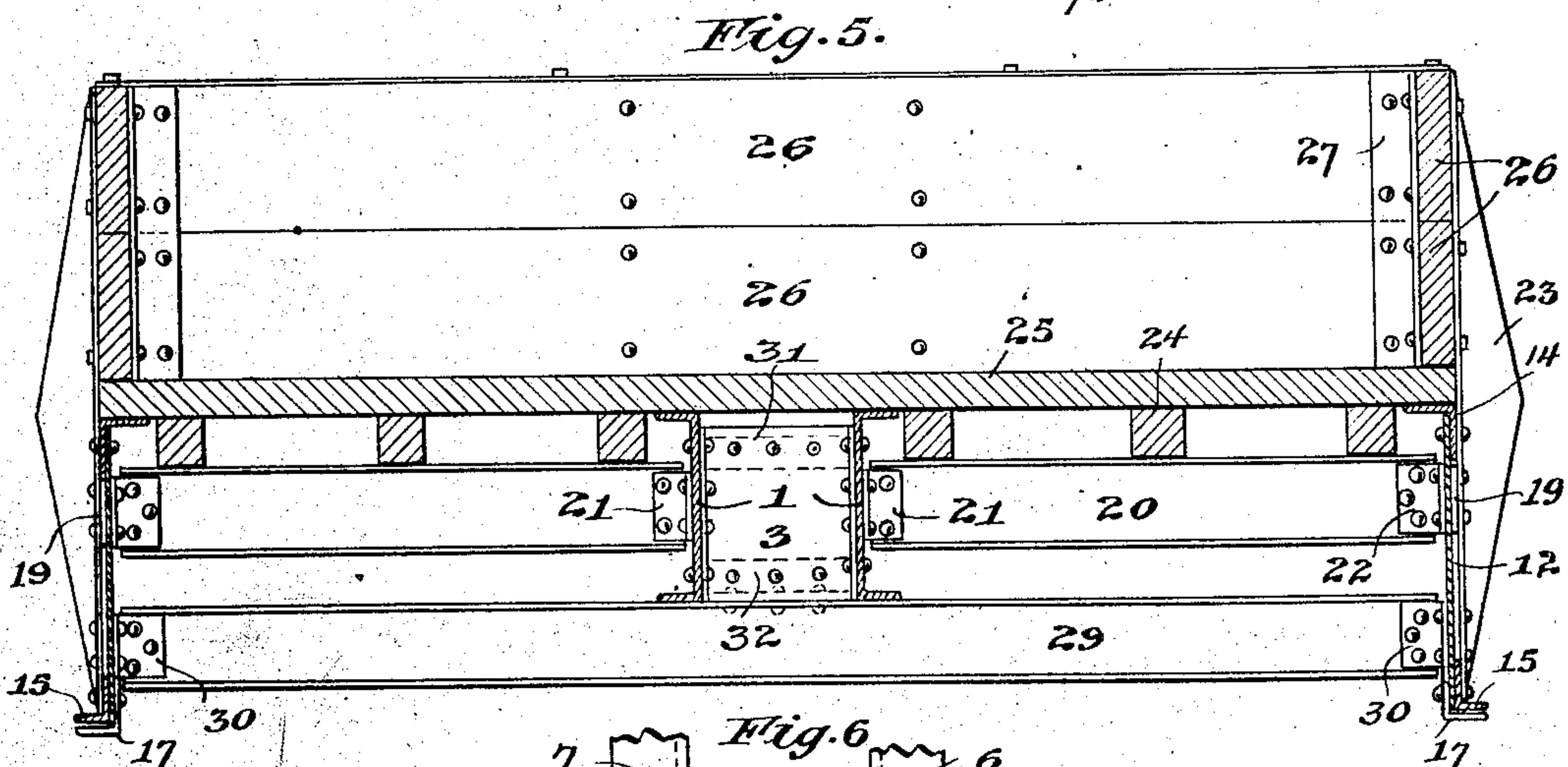
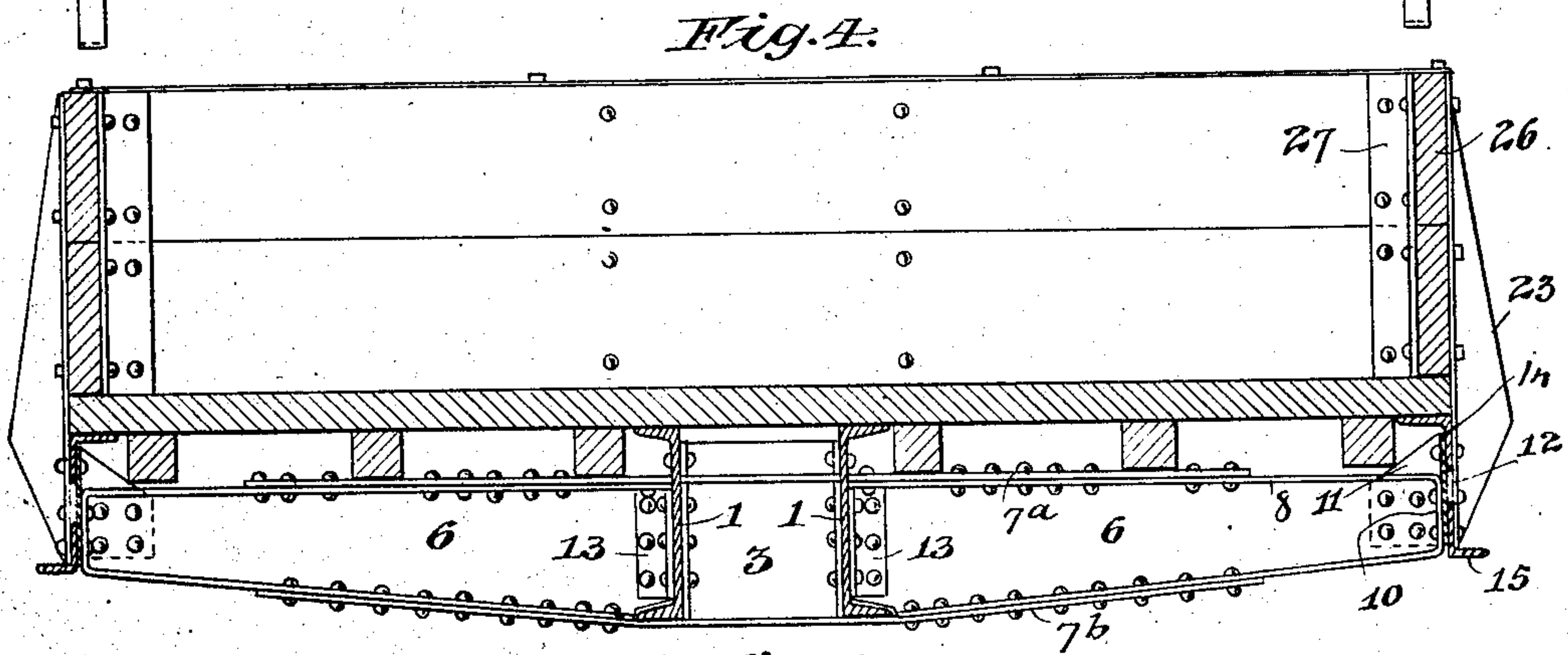
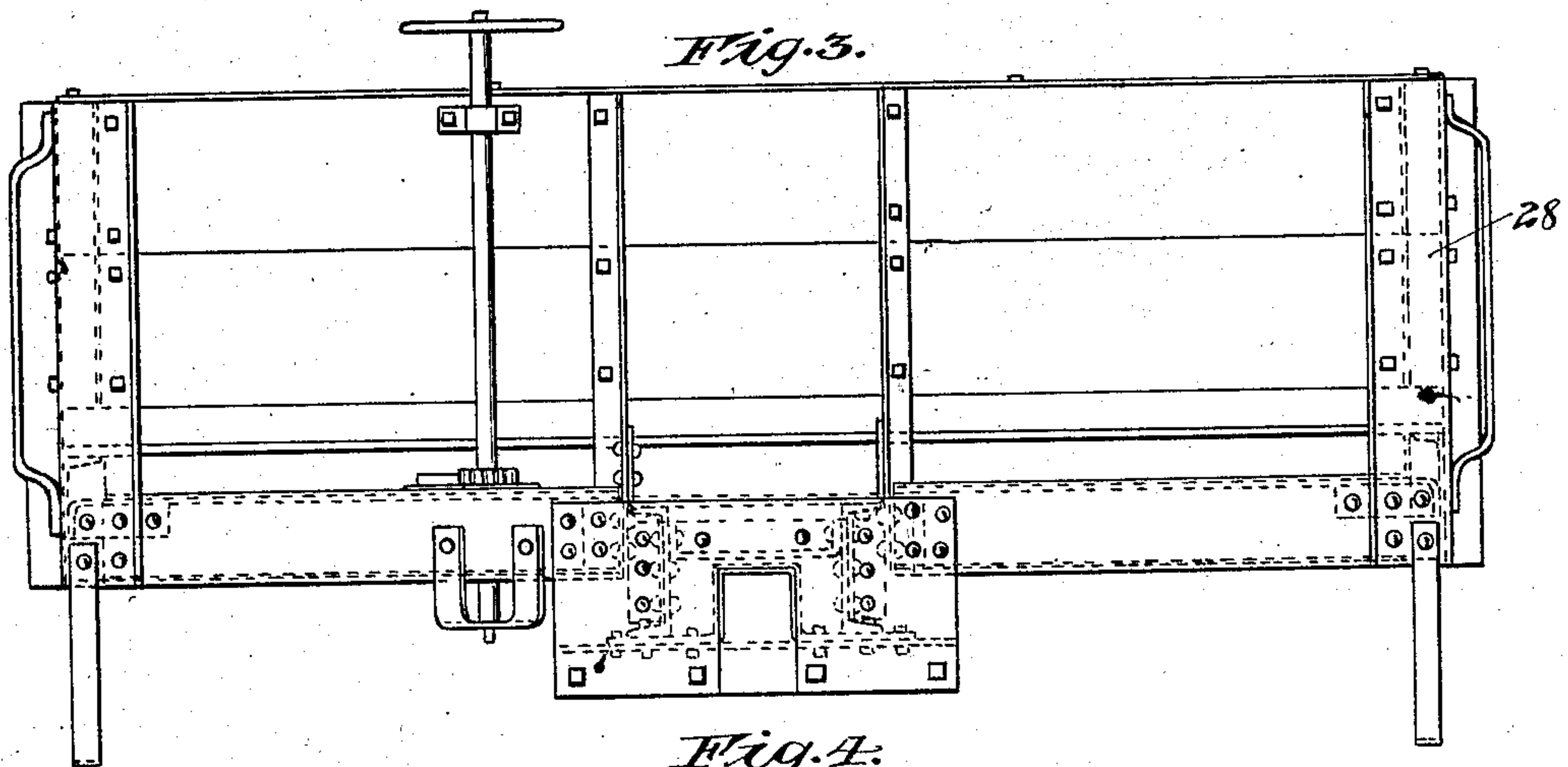
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

ETHAN I. DODDS, OF PULLMAN, ILLINOIS, ASSIGNOR TO THE PULLMAN COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## GONDOLA CAR.

No. 842,871.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed July 24, 1905. Serial No. 270,995.

*To all whom it may concern:*

Be it known that I, ETHAN I. DODDS, a citizen of the United States, residing at Pullman, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gondola Cars, of which the following is a specification.

My invention relates to cars, and is especially directed to improvements in gondola cars for securing a construction involving comparatively small parts, thus facilitating repairs without sacrificing strength.

Another object of my invention is an improved body-bolster and method of fastening the same to the side plates and side stakes.

A further object is to provide a spliced side sill the end parts of which are lighter and weaker than the other portions, so that in case of a collision the end portions will give away first, in this manner protecting the larger part of the side sill, which is more expensive and more difficult to repair.

My invention also includes improved tension and compression bars secured to the side sill, the former being comparatively heavy and the latter being spliced. Furthermore, I use extending ends of the tension and compression bars as splicing means to join together the parts of the side sill. The needle-beam of this car is held in place and supported in a novel manner, which also constitutes a part of my invention.

In the accompanying drawings I have illustrated one embodiment of my invention, wherein—

Figure 1 is a plan view of the car, a portion of the floor and sides being removed to reveal the underframe. Fig. 2 is a partial side elevation and partial longitudinal central section of the car illustrated in Fig. 1. Fig. 3 is an end view of the car. Fig. 4 is a section on line A A of Fig. 2. Fig. 5 is a section on the line B B of Fig. 2. Fig. 6 is a section on the line C C of Fig. 4.

Referring to the drawings, 1 1 are channel center sills, spaced apart by the short channel-sections 3, and extending through the body-bolsters 4, and to their protruding ends are secured the draft-sills 5. The body-bolsters comprise spaced members 6 and 7, each of which comprises a plate portion with an integral upper, lower, and end flange 8, 9, and 10, respectively. The spacer 11 is a short sec-

tion of a channel-beam, the flanges being fastened by rivets to the plates 6 and 7, and the web is riveted to the side sill 12 and to the flanges of the side stake 23. The integral end flanges 10 of members 6 and 7 are also riveted to the side sill 12, as is shown in Fig. 6. The inner ends of the body-bolster members are fastened to the center sills by the angle-plates 13. Bellied plate 12, which constitutes the side sill, has attached thereto near the upper edge the comparatively heavy compression angle-bar 14, which is integral throughout its entire length. Near the lower edge of the side sill is riveted the lighter spliced tension-bar 15, the splices being at 16. Short sections of angle-bars 17 are employed as the splicing mediums, one flange fitting against the inner side of the side sill, the other flange projecting outwardly under angle-bar 15, as is illustrated in Fig. 5. A part of the rivets used for splicing fasten together the angle-bars 15 and 17, the side sill, and the flanges of the side stake; the remaining part of the rivets securing merely the two angle-bars 15 and 17 and the side sill. The end portions 18 of the side sill are sections of channel-beams and are secured to the main side sill 12 by means of the extending ends of the angle-bars 14 and 15, which are riveted thereto, and also by means of fillet-plate 19. Cross-bearers 20 may be formed of either channel or I beams and are fastened at their inner ends to the center sills by the angle-plates 21 and at their outer ends to the side sill and to the flanges of the side stakes 23 by means of the angle-plate 22.

Floor-beams 24 are secured by bolts or otherwise to the flanges of the cross-bearers and body-bolsters, floor-planks 25 being secured to the beams 24 in any improved manner and resting also on the horizontal portions of the angle-bars 14. The side and end planks are bolted or riveted to the flanges of the side stakes and at the corners are provided with the angle-bars 27 and 28, the latter being formed by bending the web of a channel-beam longitudinally, so that the two portions are at right angles.

The channel-spacers 3 may be provided, if desired, with the stiffening angle-bars 31, and those spacers over the two needle I-beams 29 are supplied with the angle-plates 32, which are riveted to the web of the spacer and to a



flange of the needle-beam, the latter being fastened at its outer ends by means of the angle-plates 30 to the side sills and flanges of the side stake.

5 Since the channel-beams 18 are of lighter weight and weaker than the main side sill 12, they will bend or buckle first in a collision, thus protecting the main side sill from injury, and because of the splicing means  
10 shown and described the channel-beam 18 may be readily removed, repaired, and replaced or a new one inserted in its place.

From the construction illustrated and described it will be apparent to those skilled in  
15 the art that I secure the advantages set forth above, besides others not mentioned, and that various changes might be made in the structure without departing from the substance of the invention as defined by the  
20 claims.

This patent is intended to embrace only so much of the disclosure made herein as is covered by the claims.

I claim—

25 1. In a car, the combination of two center sills, a spacer for said center sills between the same, and a needle-beam secured to said spacer, substantially as described.

30 2. In a car, the combination of two channel center sills, a channel-spacer for said center sills between the same, and a needle-beam secured to said spacer, substantially as described.

35 3. In a car, the combination of two center sills, a spacer for said center sills between the same, a needle-beam, and an angle-plate securing said spacer and needle-beam together, substantially as described.

40 4. In a car, the combination of two channel center sills, a channel-spacer for said center sills between the same, the flanges of said spacer being riveted to the webs of said center sills, a needle-beam, and an angle-plate securing said spacer and needle-beam together, substantially as described.  
45

50 5. In a car, the combination of two channel center sills, a channel-spacer for said sills between the same, the flanges of said spacer being riveted to the webs of said center sills, a flanged needle-beam, and an angle-plate fastened to the flange of said needle-beam and

to the web of said channel-spacer, substantially as described.

6. In a car, the combination of a body-bolster comprising two spaced members, a  
55 spacer between said members fastened thereto, and a side stake secured to said spacer, substantially as described.

7. In a car, the combination of a body-bolster comprising two spaced members, a  
60 spacer between said members fastened thereto, a side plate, and a side stake, said plate and stake being secured to said spacer, substantially as described.

8. In a car, the combination of a body-bolster comprising two spaced members with  
65 vertical webs, a channel-spacer between said members, the flanges of said spacer being riveted to the vertical webs of said members, a side plate, and a side stake, said plate and  
70 stake being riveted to the web of said channel-spacer, substantially as described.

9. In a car, the combination of a body-bolster comprising two spaced members each  
75 having a vertical web and an outer end flange, a channel-spacer between said members, the flanges of said spacer being riveted to the webs of said members, a side plate riveted to the end flanges of said bolster members and to the web of said channel-spacer, and a  
80 flanged side stake, the flange of said stake being riveted to the web of said channel-spacer, substantially as described.

10. A sill for a railway-car, comprising a  
85 middle plate, an angle-bar longer than said plate riveted thereto adjacent to one longitudinal edge thereof and extending beyond the ends of said plate, a spliced angle-bar riveted adjacent to the opposite longitudinal  
90 edge of said middle plate and also extending beyond the ends of said central plate, said angle-bars being of unequal weight per unit of length, fillet-plates riveted to and projecting beyond the ends of said middle plate, and  
95 an end beam at each end of said sill attached to the projecting portions of said angle-bars and fillet-plates, substantially as described.

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