

No. 753,583.

PATENTED MAR. 1, 1904.

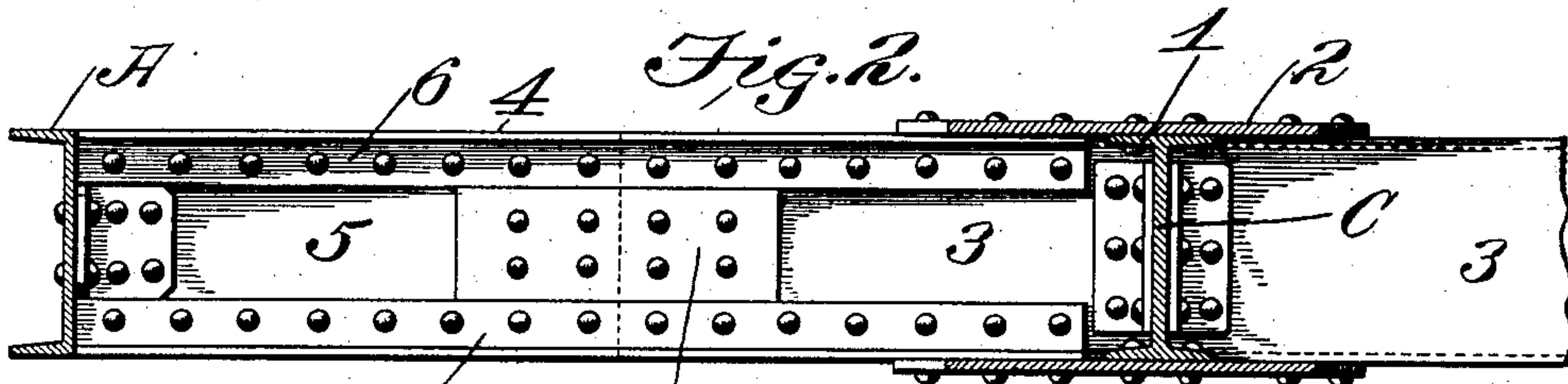
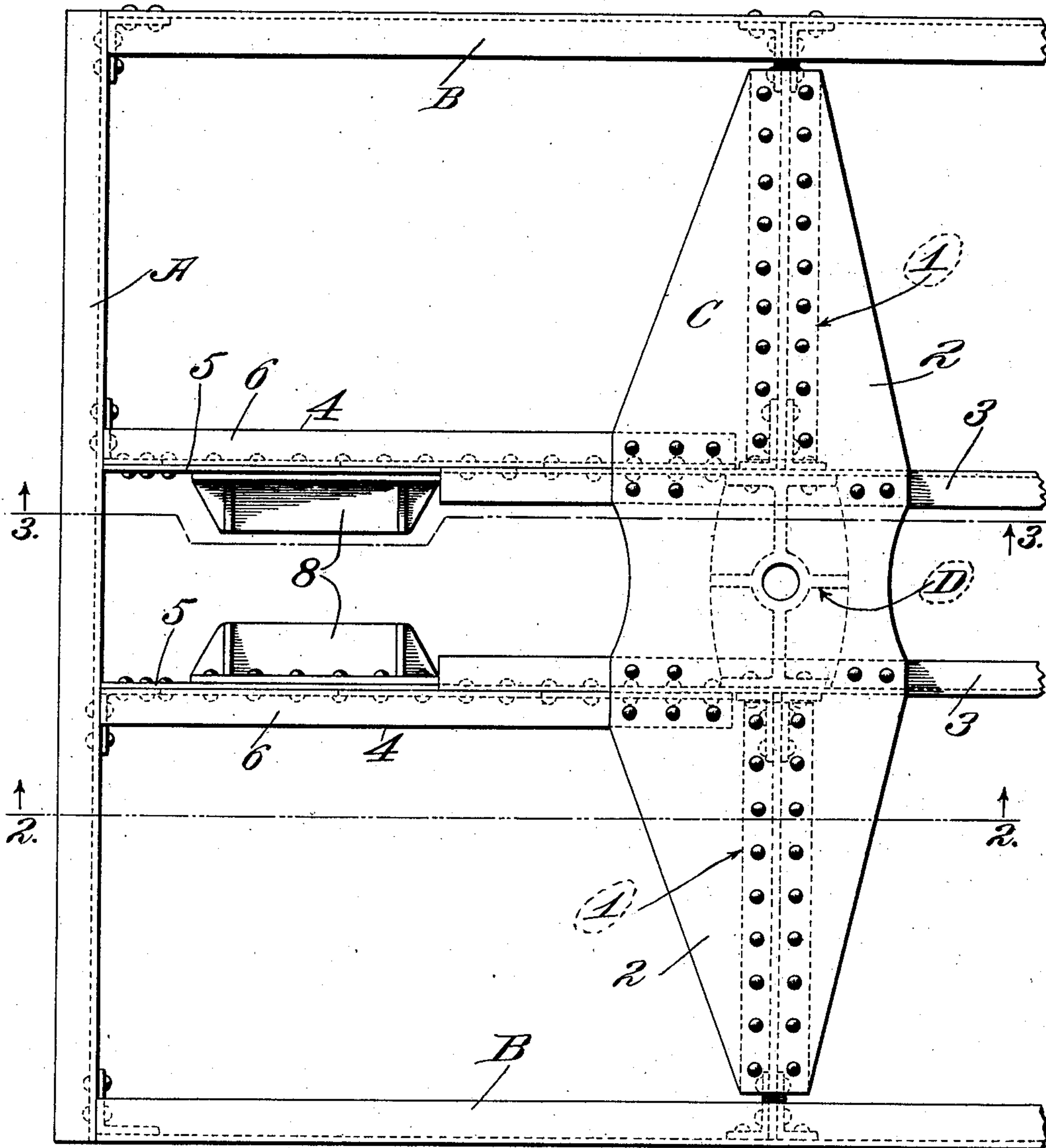
G. I. KING.
UNDERFRAMING FOR RAILWAY CARS.

APPLICATION FILED SEPT. 3, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:

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J. H. Gibbs

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2 SHEETS—SHEET 2.

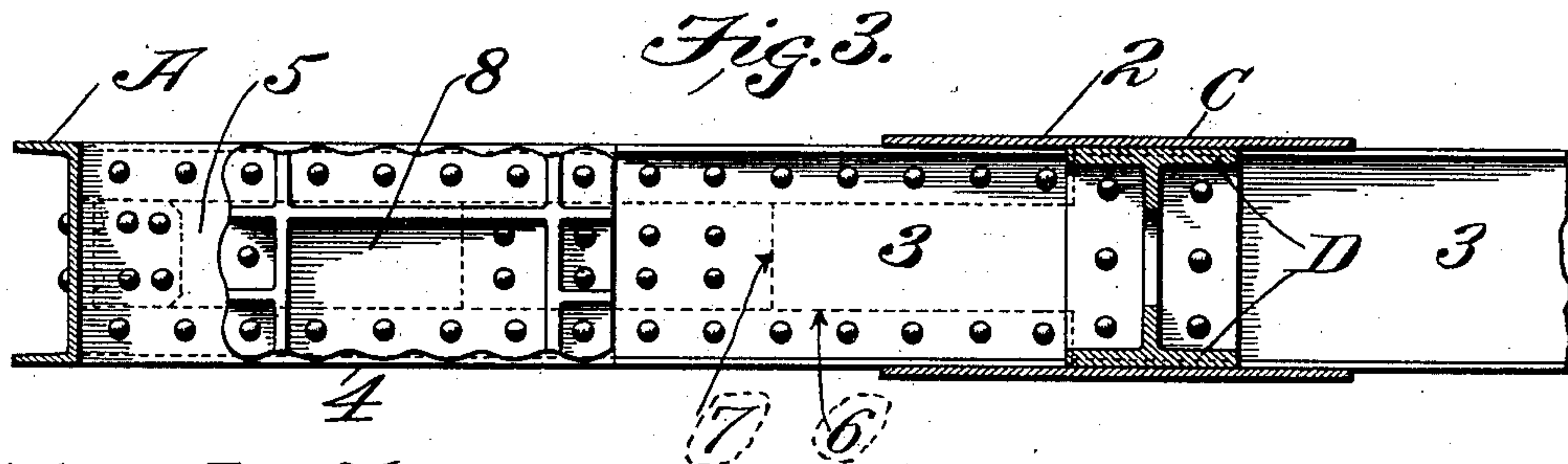


Fig. 5. Fig. 6.

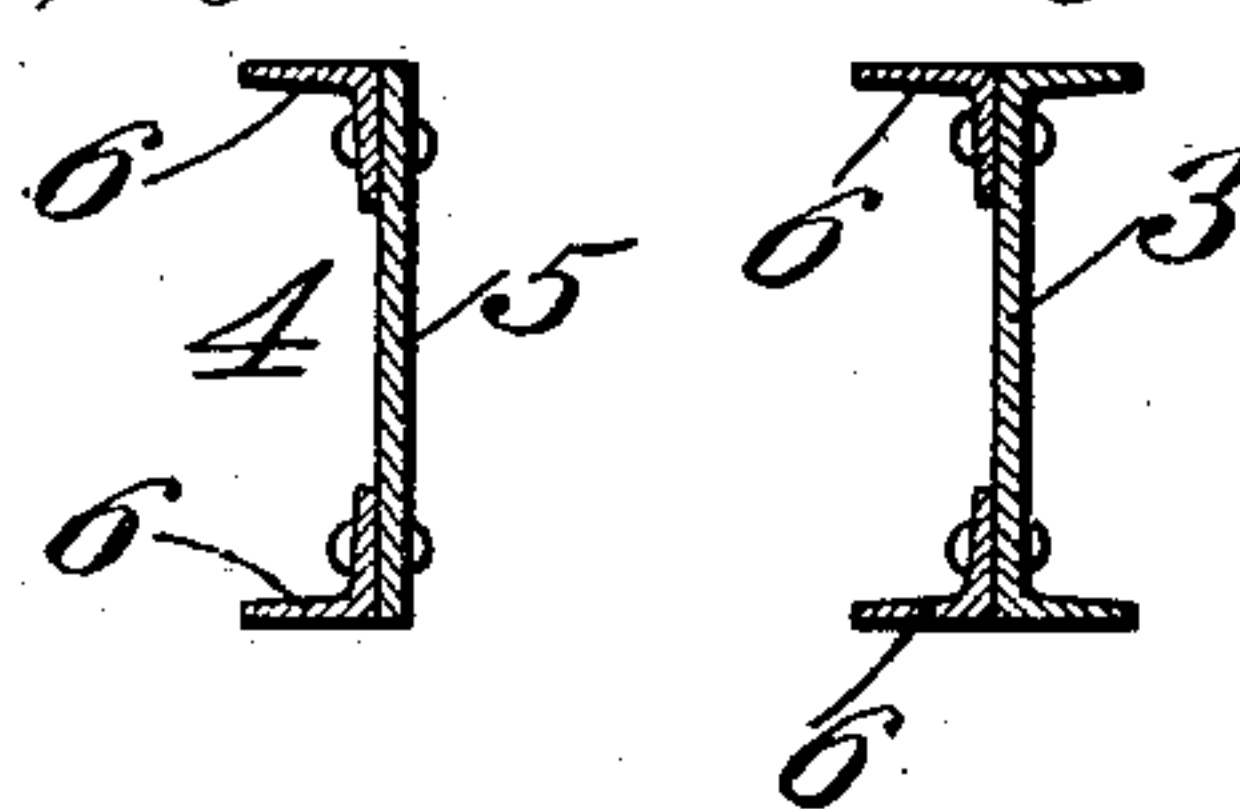


Fig. 4.

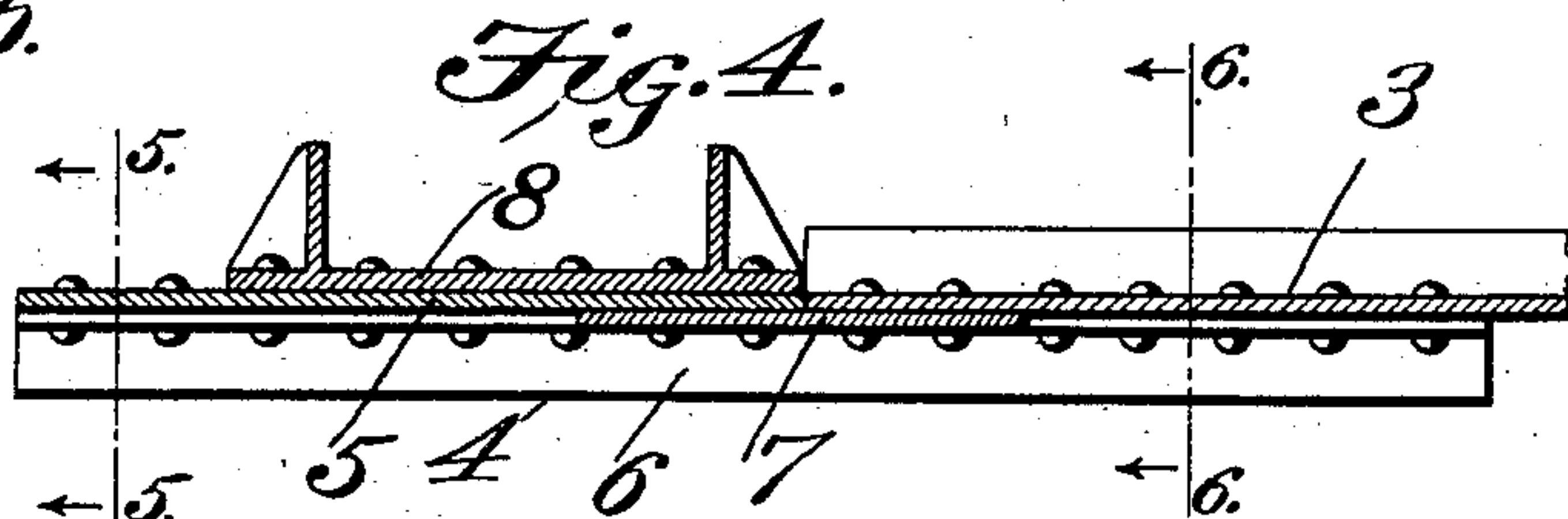


Fig. 7.

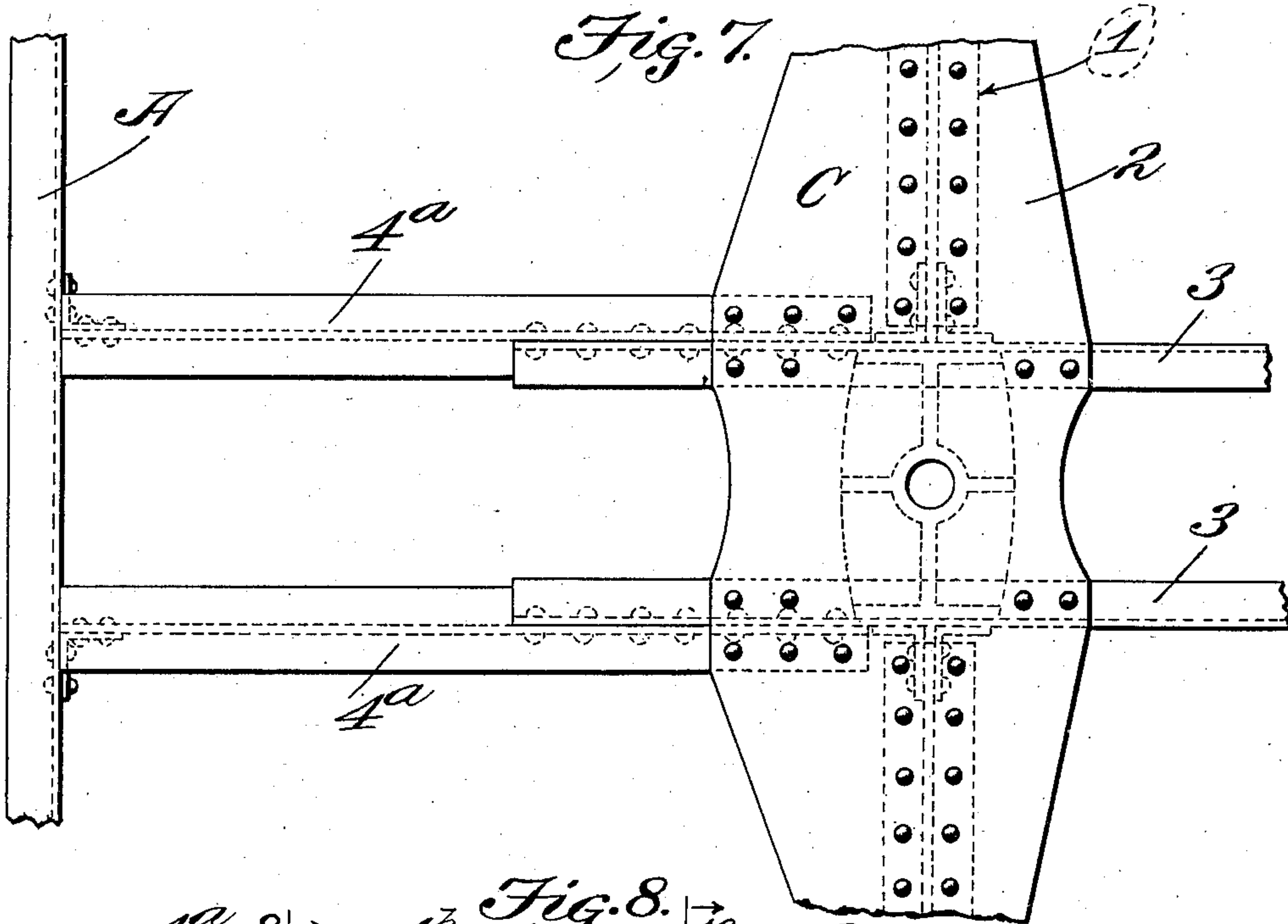
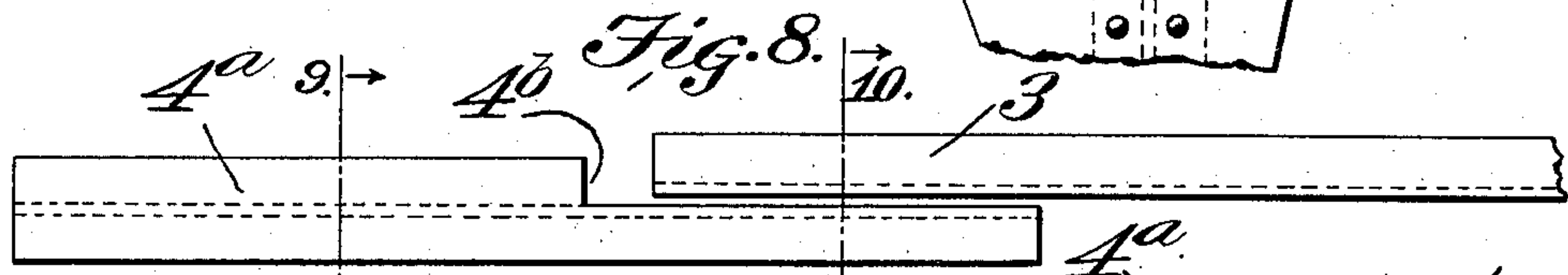


Fig. 8.



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Fig. 9.

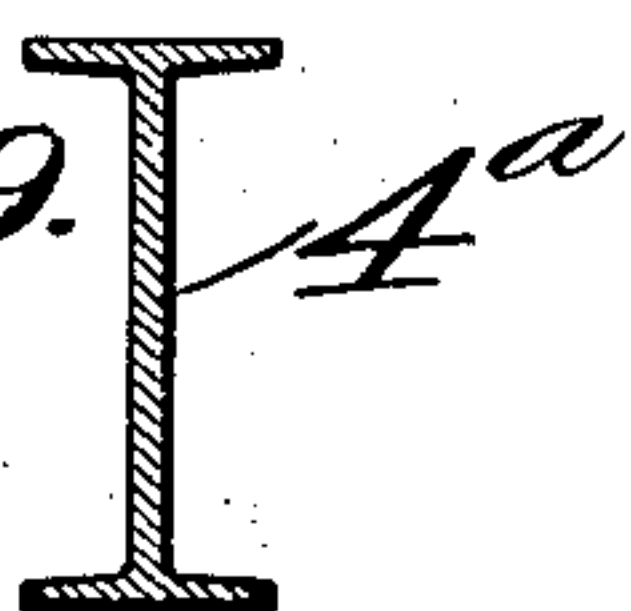


Fig. 10.



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UNITED STATES PATENT OFFICE.

GEORGE I. KING, OF MIDDLETOWN, PENNSYLVANIA.

UNDERFRAMING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 753,583, dated March 1, 1904.

Application filed September 3, 1903. Serial No. 171,759. (No model.)

To all whom it may concern:

Be it known that I, GEORGE I. KING, a citizen of the United States, residing at Middletown, Dauphin county, Pennsylvania, have invented a certain new and useful Improvement in Underframing for Railway-Cars, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of one end of an underframing for railway-cars. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a section on line 3 3 of said Fig. 1. Fig. 4 is a longitudinal section on line 4 4 of Fig. 2. Figs. 5 and 6 are sections on line 5 5 and 6 6 of Fig. 4. Fig. 7 is a fragmentary plan view of a modification hereinafter described. Fig. 8 is a detail plan view of a center sill and draft-sill, as shown in Fig. 7, said members being slightly separated; and Figs. 9 and 10 are sectional views taken on lines 9 9 and 10 10, respectively, of Fig. 8.

This invention relates to new and useful improvements in underframing for railway-cars, and relates particularly to the connection of center sills and short draft-sills extending from said center sills to the end sills of the underframing, the object being to produce a structure of the class described wherein the parts will be firmly united, yet capable of separation for renewal or repairs when necessary.

Referring to the drawings, A indicates end sills.

B indicates side sills.

C is a bolster of any convenient type provided with flanges 1, projecting laterally therefrom, to which is secured a top cover-plate 2.

3 indicates flanged center sills, shown in the present instance as extending through the bolster toward the end sills.

Between the bolster and end sills are provided flanged draft-sills 4, provided with the web portion 5, consisting of a metal plate forming the web portion thereof, to which plate are secured angles 6 at top and bottom thereof, said angles being preferably outwardly

disposed—that is, projecting toward the side sills away from said web portion 5. The plates 5, comprising the web portion of the sills, are placed in alinement with the web portion of the center sills 3, and said angles 6 extend, preferably, the entire length of said draft-sills, overlapping the web portion of the center sills, as best shown in Fig. 2; and continuing thence preferably to the vicinity of the flanges 1 of the bolster C, while between the angles 6 and secured, respectively, to the outer face of the web portion 5 of the draft-sills and the outer face of the web portion of the center sills is a splice-plate 7, which serves as a filler between said angles 6, as best shown in Fig. 2. Secured to the inner face of the web portions 5 of the short draft-sills are cheek-plates or draft-lugs 8, used in connection with the draft-rigging of the car, said plates being of the usual type and projecting inwardly between the draft-sills and abutting against the forwardly-extended flanges of the center sills 3, as best shown in Fig. 1.

While the bolster C may be of any convenient type, it is preferably of that type wherein the web portion is divided at the center sills and extends thence to the side sills, to which it is connected by the usual brackets and has the usual filler-plate D interposed between the center sills, forming a substantial continuation thereof.

One of the objects of the present invention is to provide such connection between the center sills and draft-sills that there will be either integral with or attached to one or both members some form of rigid abutment, so that strains upon either will be equally distributed, hence the placing of the web portions in alinement, and to make said abutment more rigid the cheek-plates 8 are provided, said cheek-plates being securely riveted to the web portions of said short draft-sills. Another means of securing this end abutment substantially is shown in the detail views of Figs. 7 and 8, wherein the form of center sills is substantially that of the other figures; but the draft-sills 4^a are preferably formed of I-beams, (shown in section in Fig. 9,) one of the flanges (preferably the inner flange of

said I-beam) being cut away at 4^b, as shown in Figs. 7 and 8, whereby a shoulder is provided adapted to contact with the lateral flanges of said center sills 3, the web portions of the center sills and draft-sills being riveted together, as shown in Fig. 7.

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

1. In a metallic underframing, a bolster, a cover-plate therefor, center sills connected therewith, short draft-sills extending between the bolsters and end sills, and connecting members riveted to the web portions of said center sills and said draft-sills; substantially as described.

2. In a metallic underframing, a bolster, a cover-plate therefor, center sills connected therewith, short draft-sills extending between the bolsters and end sills, and connecting members riveted to the web portions of said center sills and said draft-sills between said bolsters and end sills; substantially as described.

3. In a metallic underframing, a bolster, center sills projected through the same, short draft-sills abutting against the ends of said center sills, and connecting means therefor secured to the webs of said center sills and draft-sills; substantially as described.

4. In a metallic underframing, bolster-webs divided at the center sills, center sills extending between the web portions thereof, a cover-plate connected to said center sills and bolster, and short draft-sills connected with said cover-plate and end sills; substantially as described.

5. In a metallic underframing, a bolster divided at the center sills, center sills extending between the web portions thereof, a cover-plate connected to said center sills and bolster, short draft-sills connected with said cover-plate and end sills, and a connecting-plate secured to said center sills and draft-sills; substantially as described.

6. In a metallic underframing, center sills, short draft-sills abutting against the ends thereof, in combination with overlapping securing means connected with said center sills and said draft-sills; substantially as described.

7. In a metallic underframing, center sills extending beyond the bolster at each end, draft-sills having an abutment therefor beyond the ends of said center sills, and means connected with the webs of said center sills and draft-sills for connecting the same; substantially as described.

8. In a metallic underframing, center sills extending beyond the bolsters at each end, short draft-sills between said bolsters and the end sills, and means for connecting said draft-

sills and said center sills between the bolsters and end sills; substantially as described.

9. In a metallic underframing, center sills extending beyond the bolsters at each end, short draft-sills terminating between said bolsters and the end sills, and means for connecting said draft-sills and said center sills between the bolsters and end sills; substantially as described.

10. In a metallic underframing, center sills extending beyond the bolsters at each end, short draft-sills extending from said bolsters to the end sills, and means for connecting said center sills and draft-sills between the bolsters and the end sills; substantially as described.

11. In a metallic underframing, center sills extending beyond the bolsters at each end, short draft-sills extending from said bolsters to the end sills, and overlapping means for connecting said center sills and draft-sills between the bolsters and the end sills; substantially as described.

12. In a metallic underframing, a bolster, a bolster cover-plate, center sills connected with said cover-plate beyond said bolsters at each end, and short draft-sills connected with said cover-plate and with end sills; substantially as described.

13. In a metallic underframing, a bolster, and cover-plate therefor, center sills connected therewith, short draft-sills extending between the bolster and the end sills, and angles secured to the upper and lower edges of said center and draft-sills, to form connecting members, substantially as described.

14. In a metallic underframing, with a bolster, and cover-plate therefor, center sills connected therewith, short draft-sills extending between the bolster and the end sills, and angles extending throughout the length of the draft-sills and riveted to the upper and lower edges thereof, said angles extending inwardly and being riveted to the backs of the webs of the center sills and to said cover-plates.

15. In a metallic underframing, the combination with channel center sills of short draft-sills and connecting angles between the two, overlapping the center sills and riveted to the backs of the webs thereof, and spliced plates for connecting the webs of said center and draft sills.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 28th day of August, 1903.

GEORGE I. KING.

Witnesses:

WM. A. CROLL,

JOHN H. FRANK.