

No. 624,255.

Patented May 2, 1899.

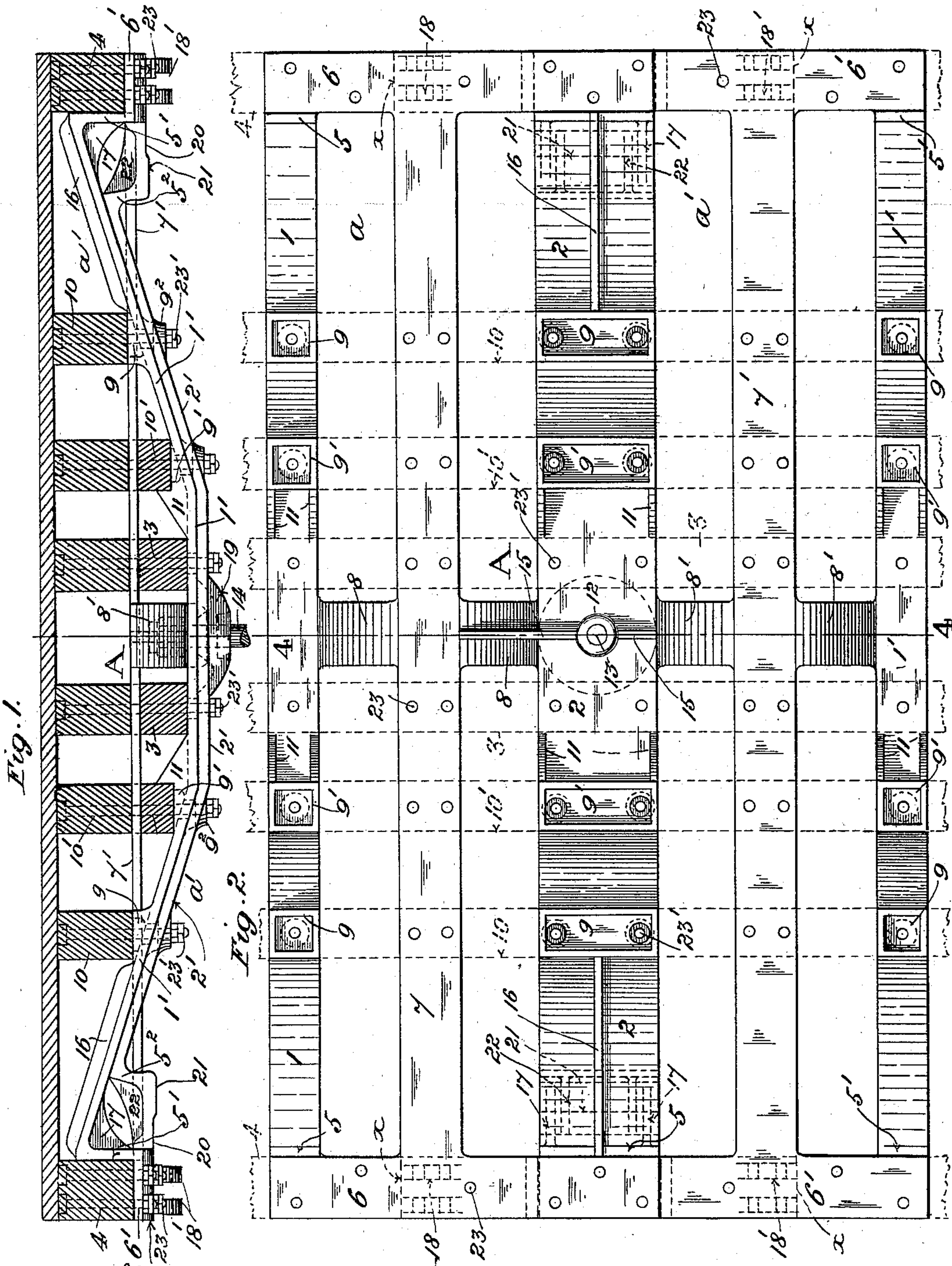
M. B. SCHAFFER.

CAR TRANSOM.

(Application filed Feb. 25, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES  
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2 Sheets—Sheet 2.

Fig. 3.

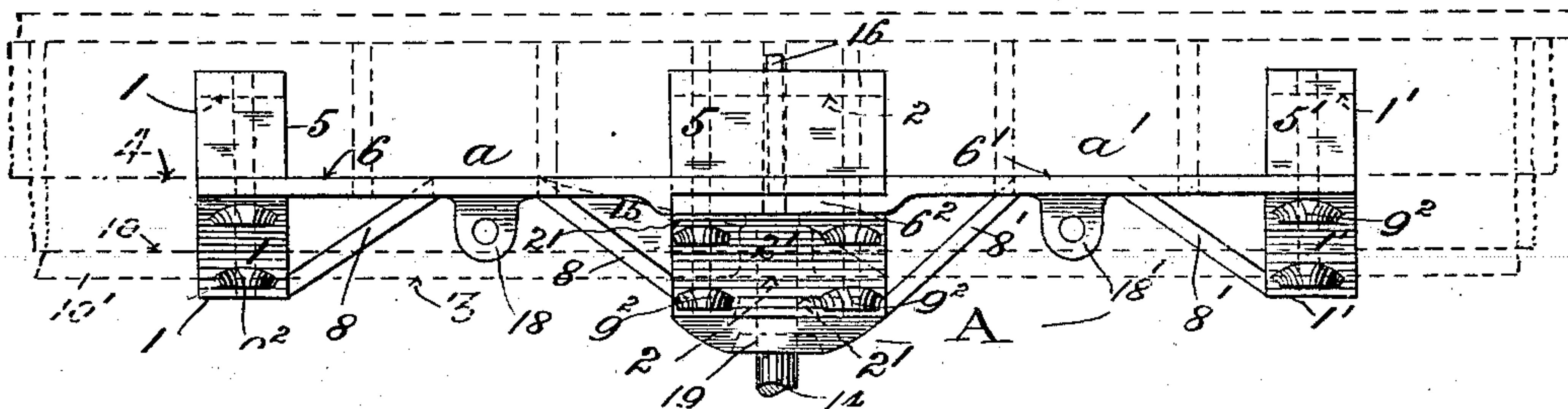


Fig. 4.

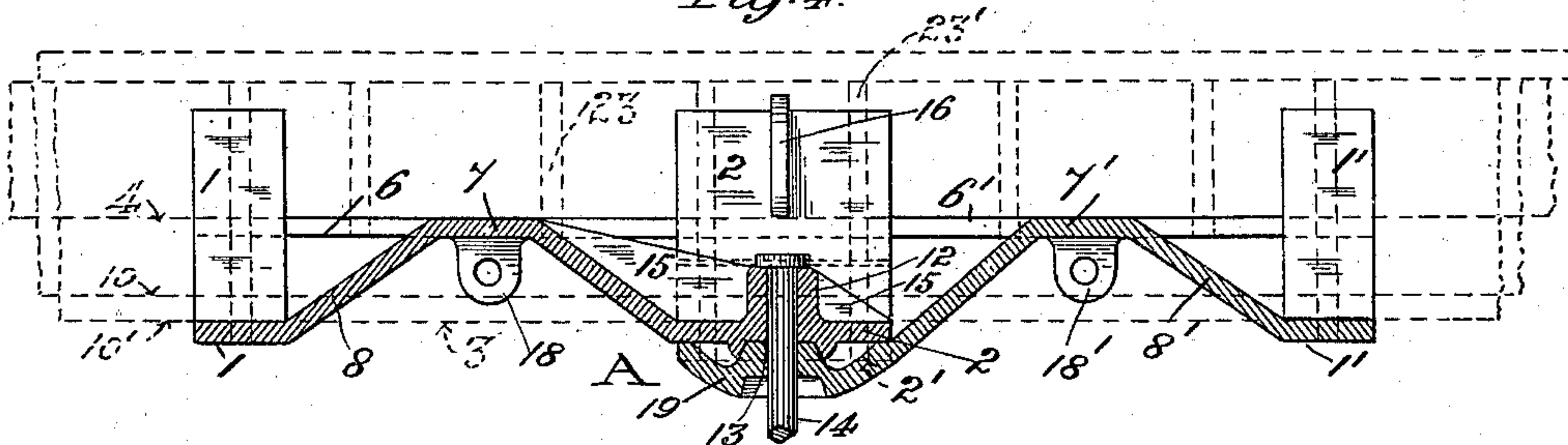


Fig. 5.

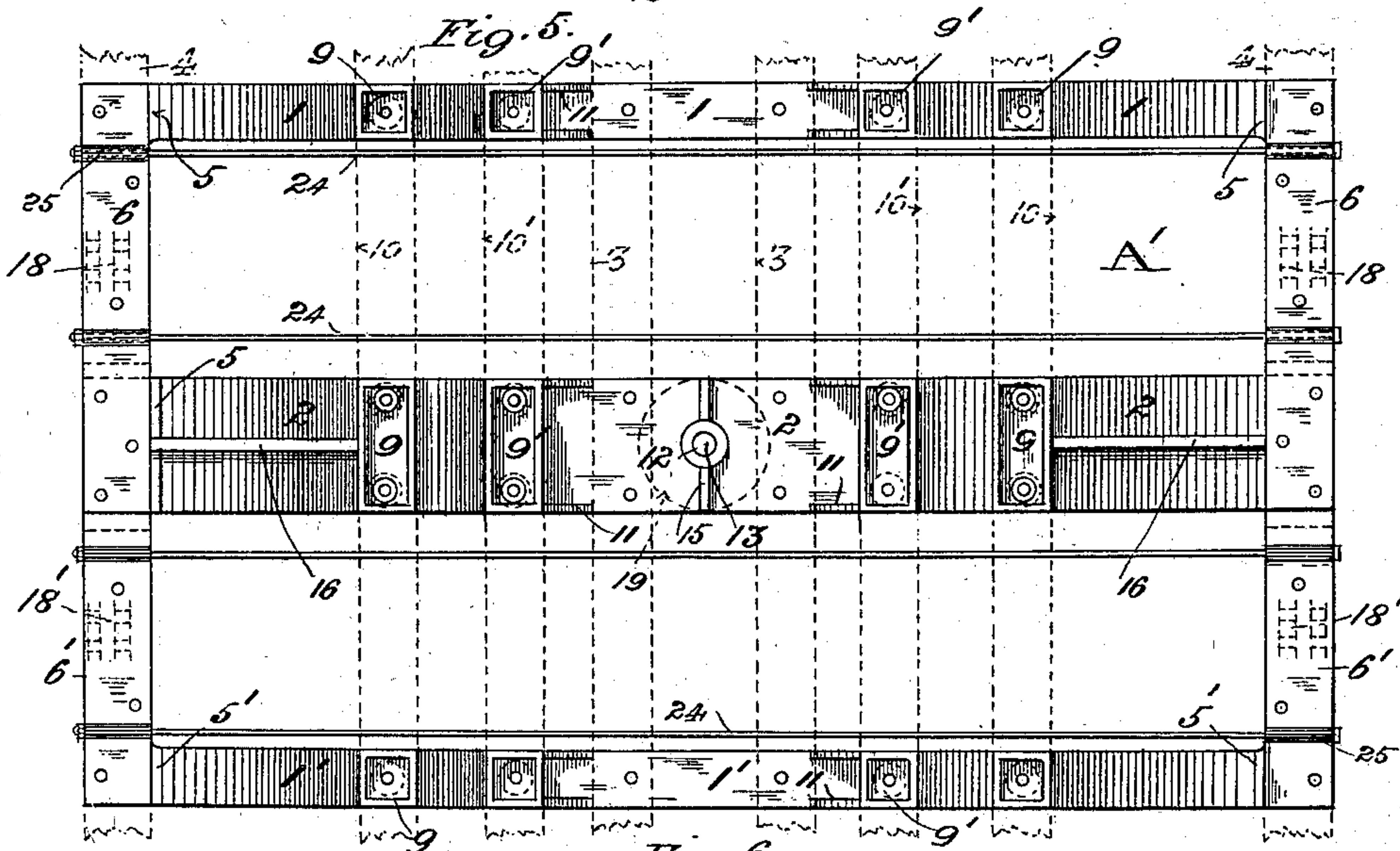
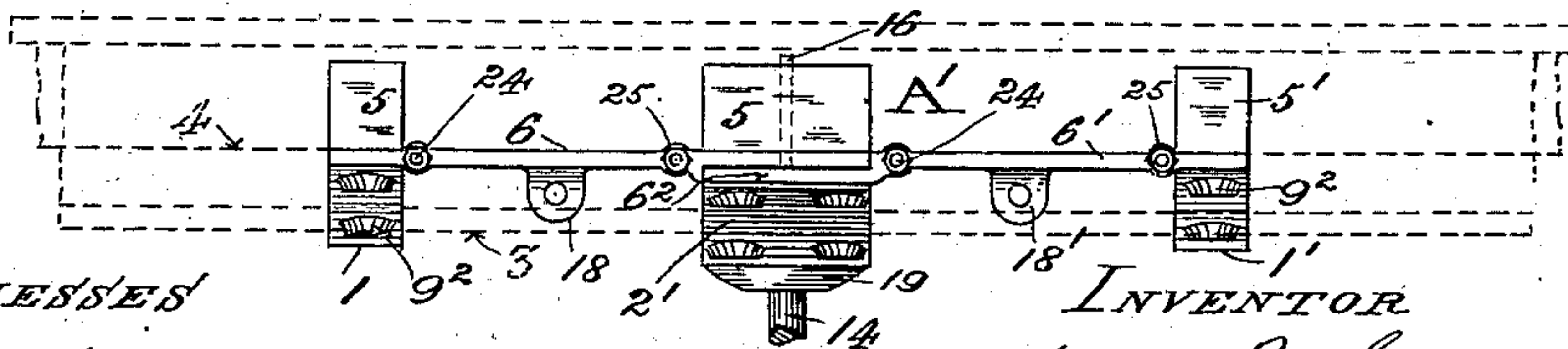


Fig. 6.



WITNESSES

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# UNITED STATES PATENT OFFICE.

MORSE B. SCHAFFER, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO  
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## CAR-TRANSOM.

SPECIFICATION forming part of Letters Patent No. 624,255, dated May 2, 1899.

Application filed February 25, 1899. Serial No. 706,893. (No model.)

*To all whom it may concern:*

Be it known that I, MORSE B. SCHAFFER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Car-Transoms, of which the following is a specification.

My invention relates to a double transom or body-bolster for railroad-cars, and has for its object to provide a double transom or body-bolster which will combine simplicity of construction with rigidity and durability.

The invention consists in features of novelty, as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 is a transverse section through the sills of a railroad-car, showing in corresponding elevation or end view a preferable form of my improved double transom or body-bolster; Fig. 2, a top plan of the transom; Fig. 3, a side elevation of the transom as seen from the side of the car; Fig. 4, a longitudinal vertical section through the transom on line 4 4 in Fig. 2; and Figs. 5 and 6 are views to a reduced scale corresponding to Figs. 2 and 3, respectively, showing an alternative mode of bracing the transom.

Like letters and numerals of reference denote like parts in all the figures.

An ordinary double transom or body-bolster usually comprises two single transoms having top and bottom plates or arch-bars, respectively, with their thimbles and connecting-bolts, a longitudinal truss connecting the two transoms together and having the body center-bearing and center-plate castings secured thereto, the side-bearing arch-bars, and the truss-rod irons, all the said parts being separate pieces and built up or connected together by bolts or other fastenings, thereby rendering the structure as a whole complicated, cumbersome, and costly. Moreover, by the continual jar to which the parts are subjected the fastenings are liable to work loose, which impairs the rigidity of the transom and necessitates frequent repairs and constant watchfulness. By my invention I combine these separate parts in a

double piece, and thereby dispense with all fastenings except the bolts for securing the transom to the car, and by this means I produce a transom which is simple in construction, non-composite, rigid, compact, and durable and adds to the strength of the car.

A represents a preferable form of my improved double transom, consisting of two pieces *a a'*, each of which is made integral, preferably of cast-steel. The piece *a* is composed of two bottom plates 1 2, which are arranged transversely to the car in different vertical planes and correspond to the bottom plate or arch-bar of an ordinary transom. The plates 1 2 bear at their lower central level portions against the undersides of the middle sills 3 of the car, and from the ends of these level portions the plates 1 2 incline upward to near the top of each side sill 4, where they are preferably formed, respectively, with a vertically-depending flange 5, which bears against the inner face of the side sill 4, and unites at the bottom with the horizontal side plate 6, which extends along and bears against the under side of the car-sill 4 for the entire length of the part *a*. Between the bottom plates 1 2 is a horizontal top plate 7, arranged transversely to the car, which plate corresponds to the top plate or arch-bar of the ordinary transom and unites at its ends with the horizontal side plates 6, and is united, preferably in the middle, to the bottom plates 1 2 by the inclined plates 8. On the inclined portions of the plates 1 2 are formed brackets or bosses 9 9', which bear against the under sides of the intermediate sills 10 10' of the car, the brackets 9' having strengthening-ribs 11, which abut against the inner faces of the sills 10' and unite at their base with the lower level portions of the plates 1 2. On the under side of the inclined portions of the plate 1 are bosses 9<sup>2</sup>, which correspond to the upper bosses 9 9', and through the bosses 9, 9', and 9<sup>2</sup> are holes for receiving the bolts by which the part *a* is secured to the car, as hereinafter more particularly referred to. On the central portion of the plate 2 is formed the upwardly-projecting body center bearing 12, having the hole 13 for receiving the king-bolt 14, and having preferably strengthening-ribs



15, which extend therefrom to the outer edge of the plate 2 and to the horizontal plate 7, respectively. Strengthening-ribs 16 are preferably formed on the inclined portions of the plate 2 and extend from or adjacent to the side sills 4 for a suitable distance toward the sills 10. Between the inclined portions and depending flanges 5 of the plate 2 are strengthening-ribs 17. Other strengthening-ribs may be disposed about the part *a*, as deemed desirable. On the under side of each horizontal side plate 6 are formed lugs 18, to which the ends of the truss-rods (not shown) are coupled. The piece *a* thus constructed and comprising the body center bearing 12 and two opposite side lugs 18 for the truss-rods is integral throughout and preferably of cast-steel.

The piece *a'* is practically a duplicate of the piece *a*, its various parts being designated by the numerals 1' 2', and so on, according to the corresponding parts of the piece *a*, with the following differences, to wit: The plate 2' of the piece *a'* underlies the plate 2 of the piece *a* and is formed at its central portion with the center plate 19, which is aligned to the center bearing 12 on the plate 2 of the piece *a* for receiving the king-bolt 14 and engaging with the center plate of the truck-bolster. (Not shown.) Furthermore, the brackets or bosses 9 9', with the ribs 11 15 16 of the plate 2, are omitted from the plate 2', which is thereby rendered flush on its upper side and bears against the under side of the plate 2, with which it coincides, the inclined portions of the plate 2' terminating at a suitable distance from the depending flanges 5 of the plate 2 and formed thereat, respectively, with a depending flange 5<sup>2</sup>, which unites at the bottom with an outwardly-projecting horizontal plate 20, the plate 20 uniting with the horizontal side plate 6' and having formed on its under side a projecting portion 21, which constitutes the side bearing of the transom A. The horizontal side plate 6' where it unites with the plate 20 is formed with an offset portion 6<sup>2</sup>, which underlies the corresponding level portion of the plate 6 of the piece *a*, as clearly shown in Fig. 3. On the under side of the inclined portions of the plate 2' are bosses 9<sup>2</sup>, corresponding to the bosses 9<sup>2</sup> on the plate 1, these bosses 9<sup>2</sup> being omitted from the plate 2 of the piece *a*. Between the depending flanges 5<sup>2</sup> and horizontal plates 20 of the plate 2' are strengthening-ribs 22, and on the under side of the horizontal side plates 6' are formed the opposite side lugs 18' for the truss-rods.

The entire piece *a'*, comprising the center plate 19, the side bearings 21, and the lugs 18' for the truss-rods, is integral throughout, as in the case of the piece *a*, the complete transom A being secured to the sills 3, 4, 10, and 10' of the car by bolts 23 23', as seen in Fig. 1, the said sills and bolt-holes being indicated by broken lines in the remaining figures.

By arranging the two pieces *a a'* of the tran-

som A so that the plate 2, having the body center bearing 12, overlaps the plate 2', having the center plate 19 and side bearings 21, a double thickness is practically imparted to the transom A thereat. By the passage of the bolts 23' through the overlapping and underlying plates 2 2' the two pieces *a a'* are thereby firmly held together thereat, as well as to the sills of the car, by the bolts 23 23'.

If desired, the upper horizontal plates 7 7', with their inclined connecting-plates 8 8', may be dispensed with and transom A braced by the tie-bolts 24, which pass through tubular enlargements 25, formed in the side plates 6 6', and thereby connect the said plates together, as shown in Figs. 5 and 6, or the tie-bolts 24 may be otherwise arranged, as desired; or, if desired, the top horizontal plates 7 7' may be retained and the bottom plates 1 1' dispensed with, in which case the horizontal side plates 6 6' may either extend their full length, as shown, or shortened to the distance between the outer side edges of the plates 7 7', as indicated by the dotted lines *x* in Fig. 2.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A car-transom composed of two pieces, each piece having a top plate and a bottom plate arranged transversely to the car in different vertical planes, each end of the bottom plate having a depending flange, the bottom plate of one piece having the body center bearing and overlapping the bottom plate of the other piece having the center plate and the side bearings, and each piece having a horizontal plate arranged longitudinally to the car at each side thereof, and united to the corresponding end of the top plate and to the corresponding flange of the bottom plate, the said horizontal side plates having lugs for the truss-rods, all the said parts being integral with the said pieces respectively, substantially as described.

2. A car-transom composed of two pieces, each piece having bottom plates arranged transversely to the car in different vertical planes, each end of the bottom plates respectively having a depending flange, one of the bottom plates of one piece having the body center bearing and overlapping the corresponding bottom plate of the other piece having the center plate and the side bearings, and each piece having a horizontal plate arranged longitudinally to the car at each side thereof and united to the corresponding flanges of the bottom plates, the said horizontal side plates having the lugs for the truss-rods and having tubular enlargements, all the said parts being integral with the said pieces respectively, substantially as described.

3. A car-transom composed of two pieces respectively integral, one piece partly overlapping the other piece, and each piece having a plurality of surfaces arranged transversely to the car in different vertical planes



and having a horizontal surface arranged longitudinally to the car at each side thereof and uniting with the said transverse surfaces—the said surfaces bearing against the  
5 under sides of the car-sills, one of the said pieces having integral therewith the body center bearing and lugs for the truss-rods, and the other piece having integral there-

with the center plate, the side bearings and lugs for the truss-rods, substantially as described.

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