

(No Model.)

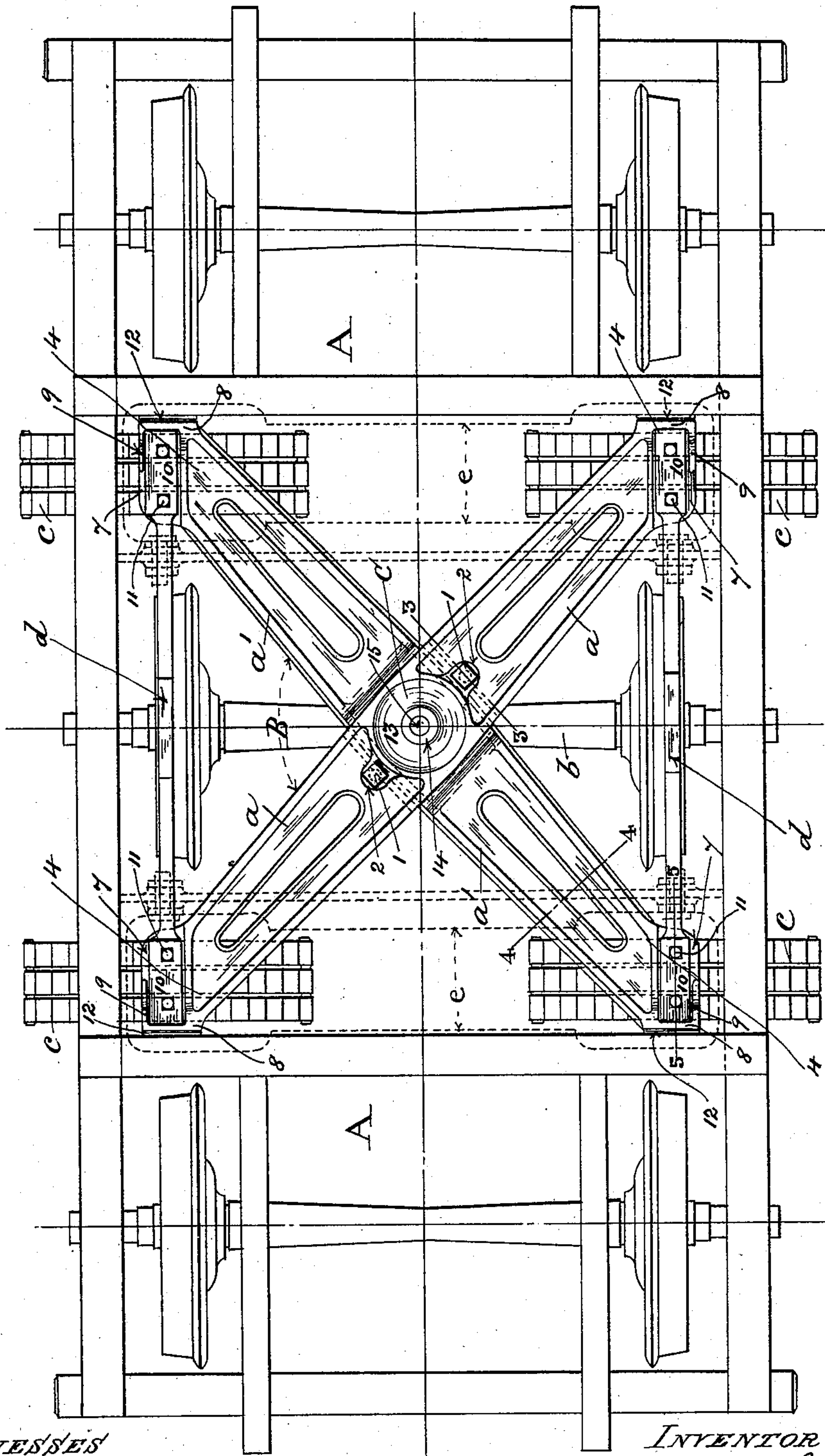
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M. B. SCHAFFER.
CAR TRUCK.

No. 592,258.

Patented Oct. 26, 1897.

Fig. 1.



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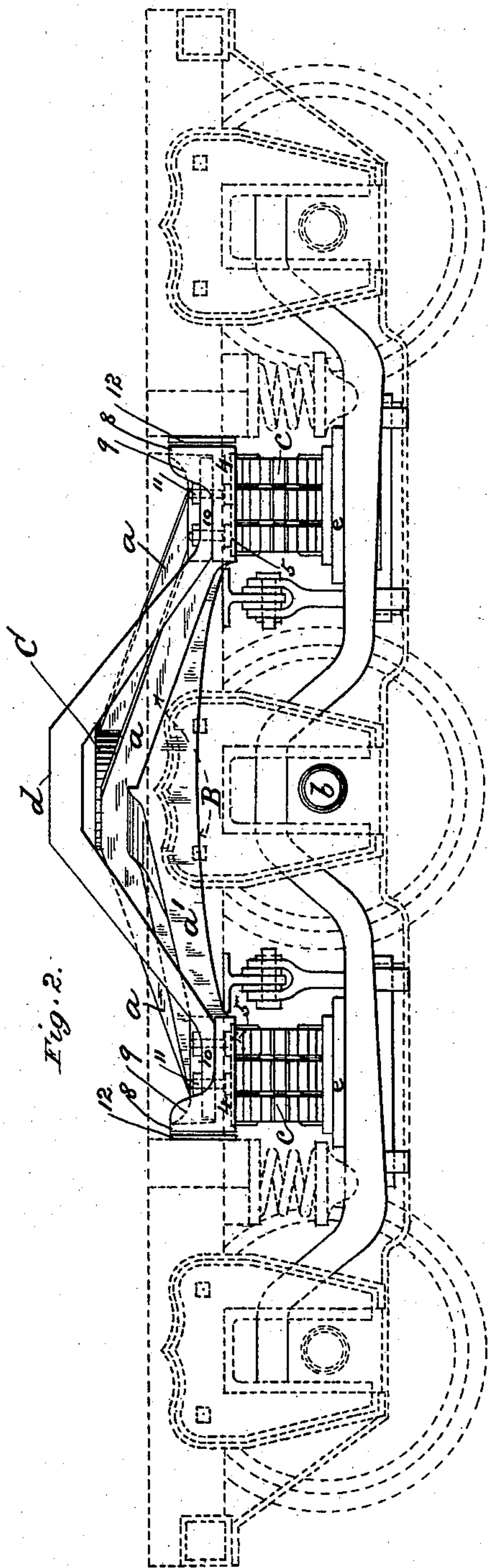


Fig. 2.

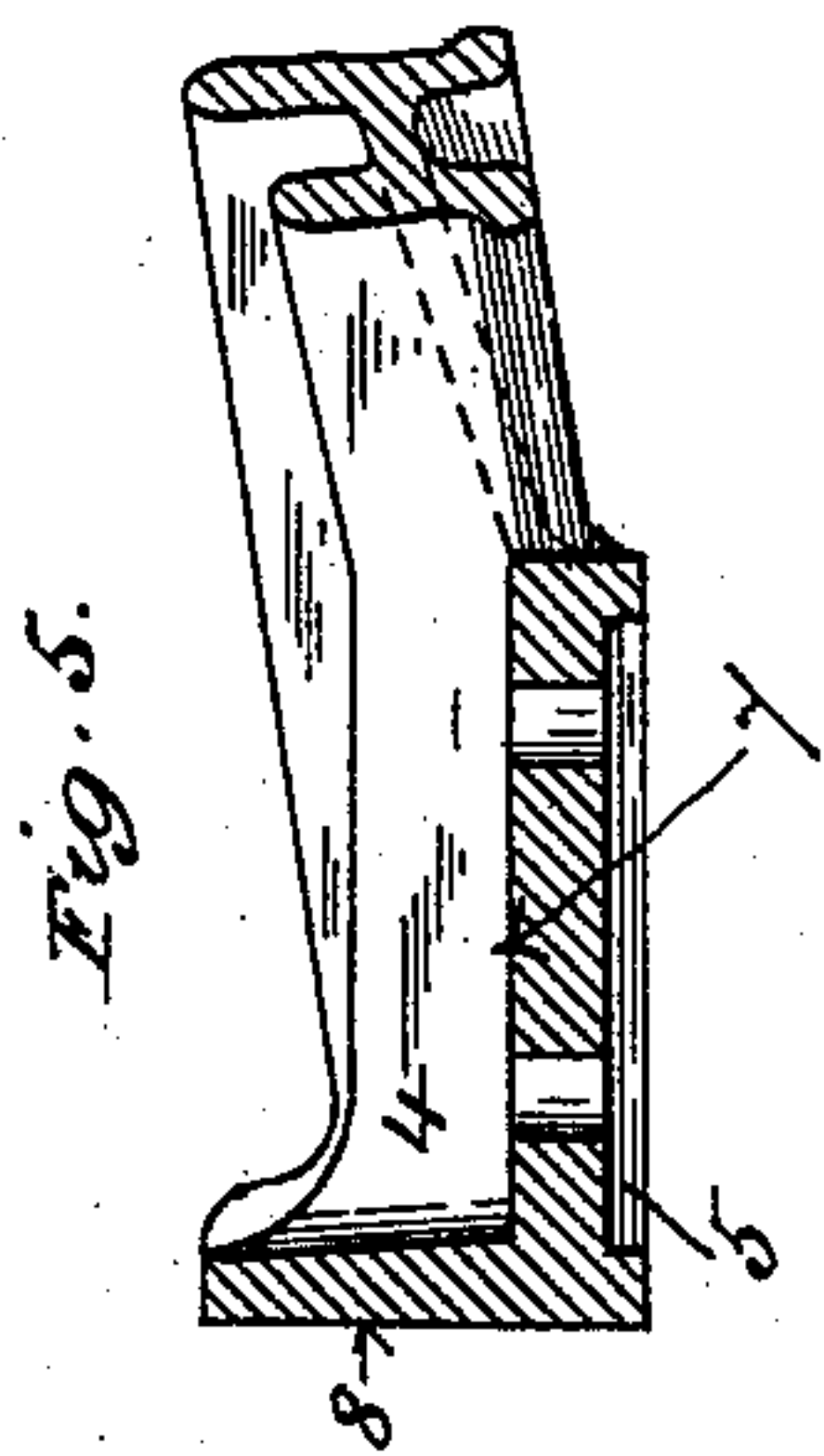


Fig. 5.

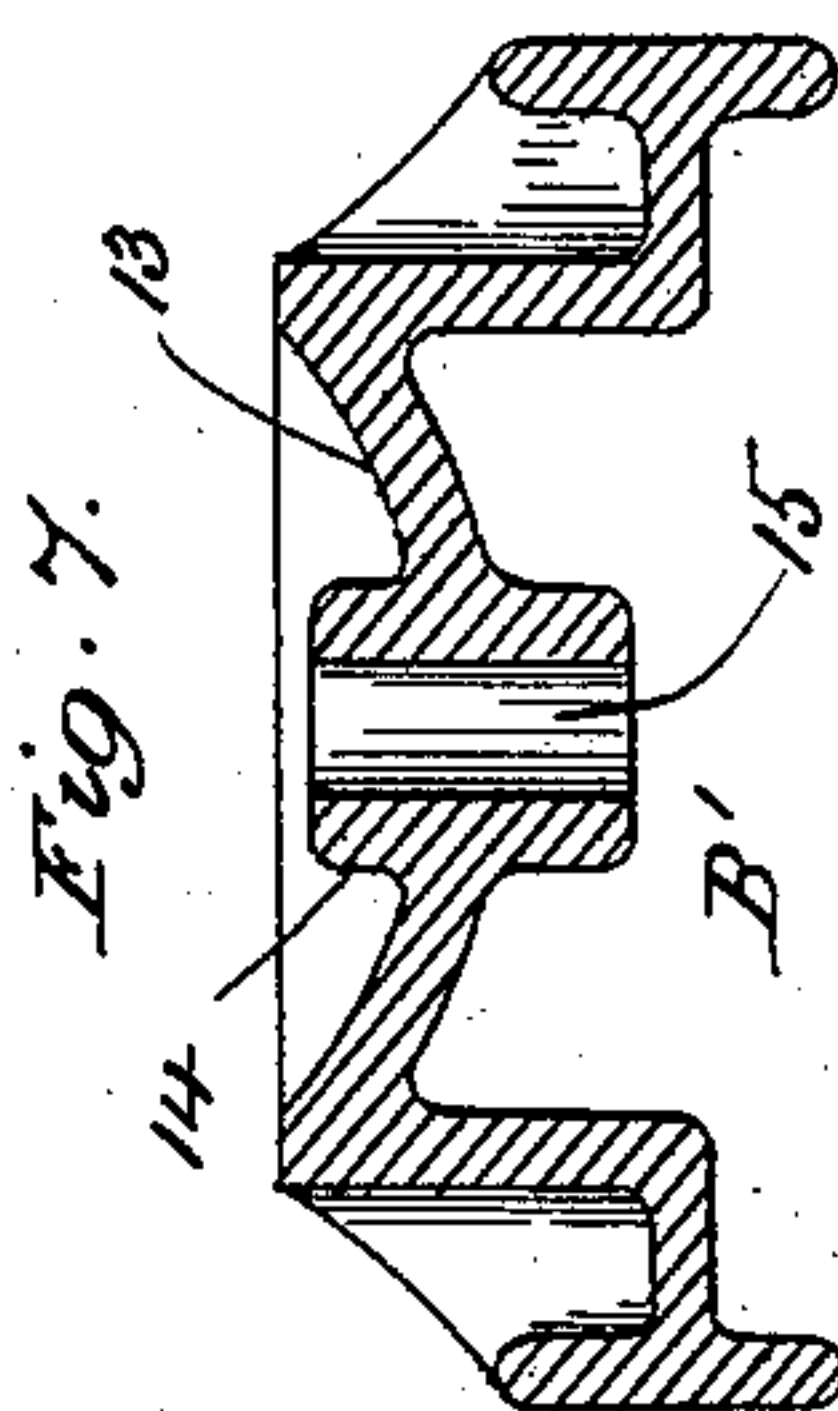


Fig. 7.

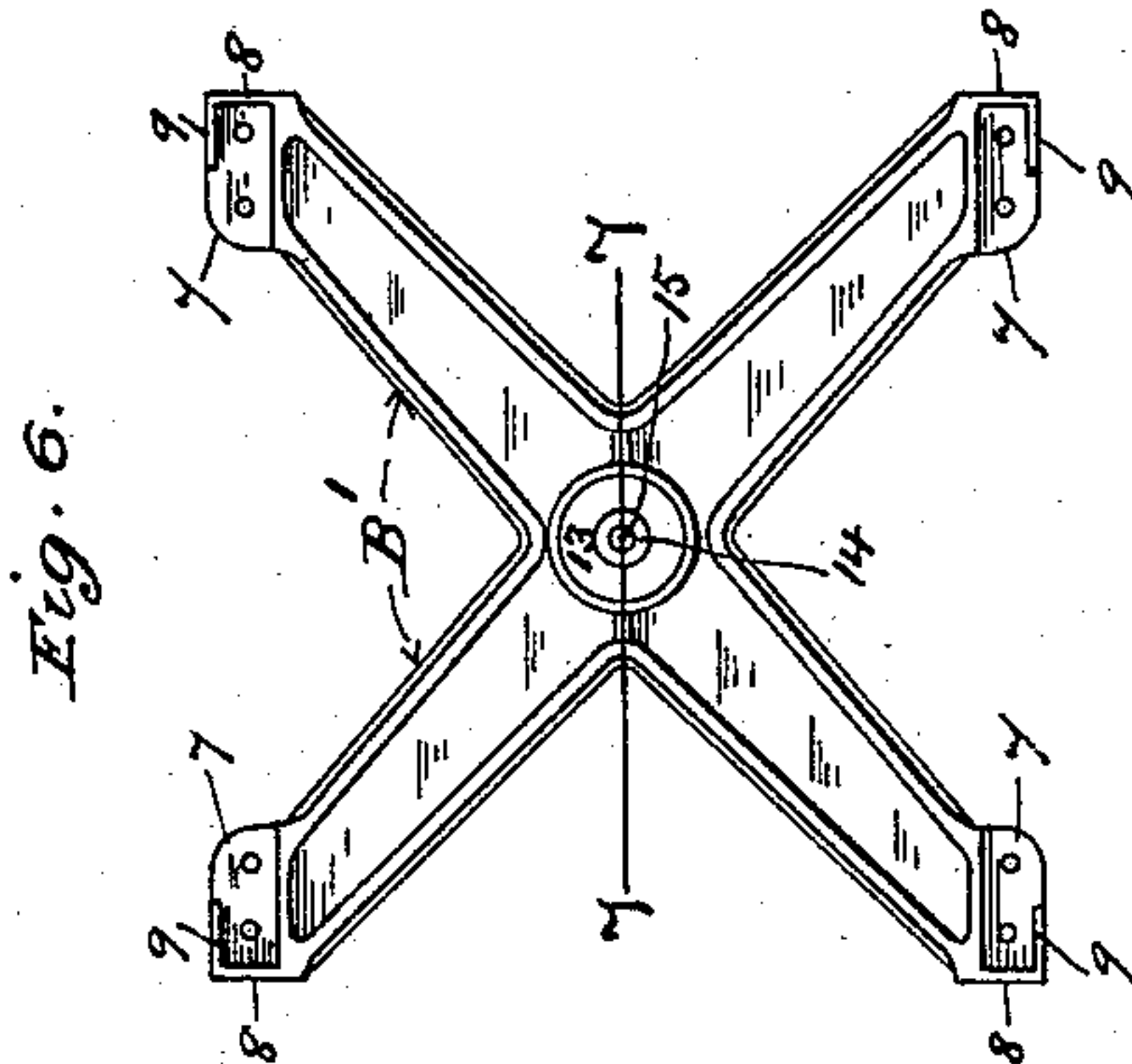


Fig. 6.

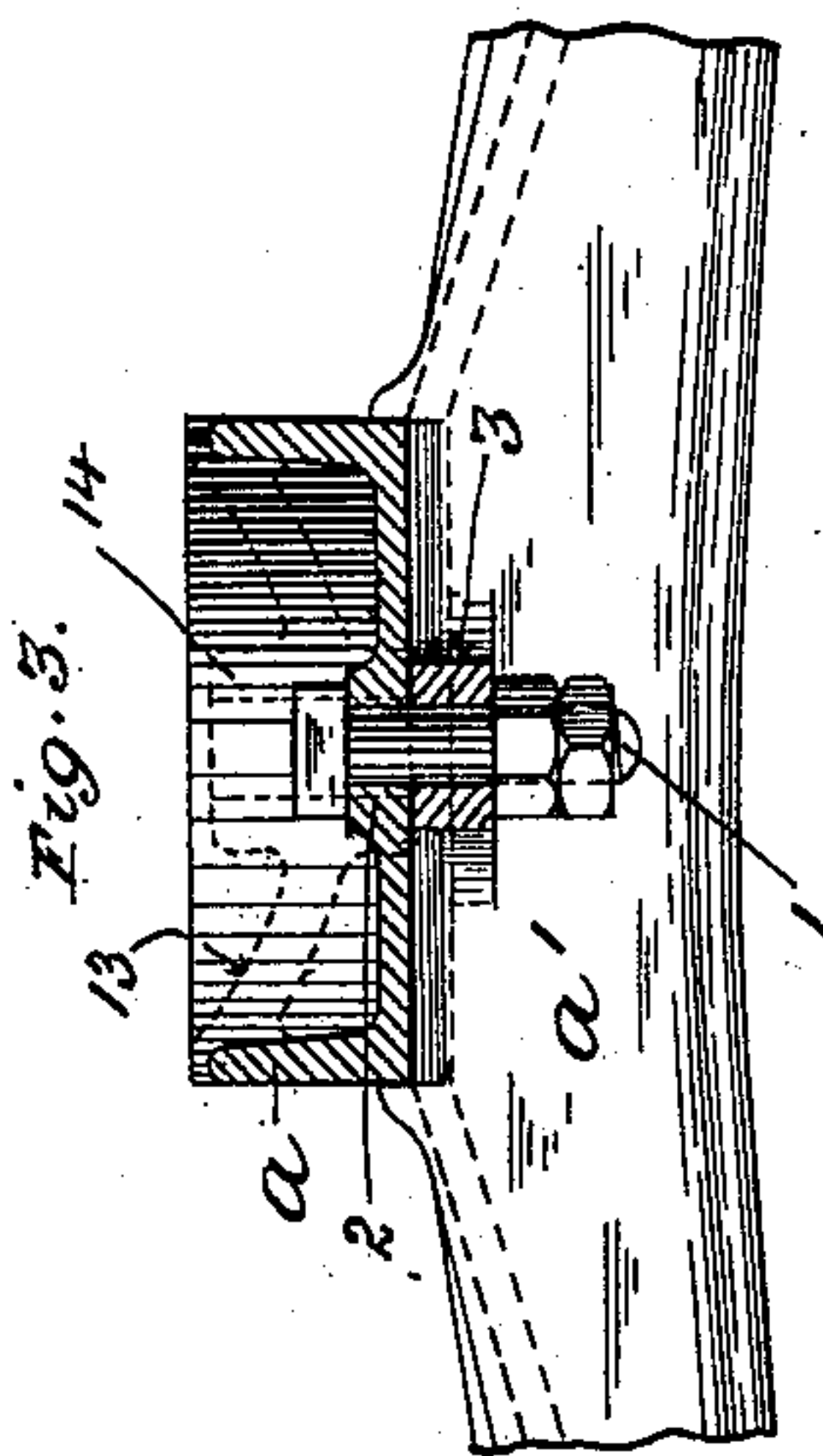


Fig. 3.

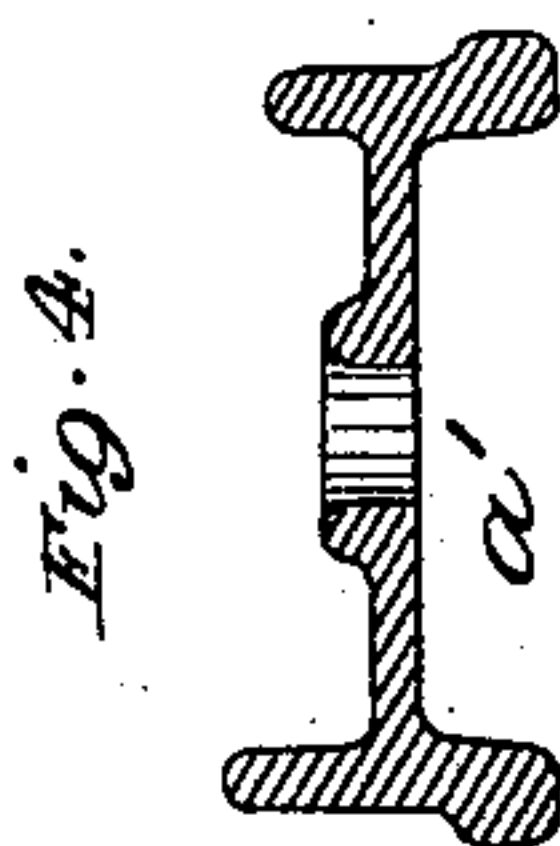


Fig. 4.

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UNITED STATES PATENT OFFICE.

MORSE B. SCHAFFER, OF ST. LOUIS, MISSOURI.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 592,258, dated October 26, 1897.

Application filed July 19, 1897. Serial No. 645,034. (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
5 a new and useful Improvement in Car-Trucks, of which the following is a specification.

This invention relates to the swing-motion center of a six-wheel passenger-car truck. Usually the swing-motion center comprises
10 the center-plate, the center-bearing beam, the center-bearing arch-bars, and the spring-beams, all of separate construction secured together by bolts, in consequence whereof the center-bearing beam and the spring-beams,
15 which are of combined wood and iron, shrink and split and become warped, thereby causing the car-body to drop and bear upon the side bearings, which prevents the free play of the truck.

20 My invention has for its object to substitute for the separate parts enumerated, with their bolts or fastenings, a swing-motion center, which consists of a practically single spring-beam, composed, preferably, of cast-
25 steel, and having the center-plate combined therewith without the intervention of the center-bearing beam and the center-bearing arch-bars, whereby a strong, inflexible, simple, and durable structure is obtained.

30 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—

35 Figure 1 is a top plan of my improved swing-motion center applied to a six-wheel passenger-car truck, parts of which are omitted and parts indicated by broken lines to avoid obscurity; Fig. 2, a side elevation of the swing-
40 motion center and the adjacent parts of the truck, which is otherwise indicated by broken lines to avoid obscurity; Fig. 3, a vertical cross-section, to enlarged scale, through the body of the swing-motion center on line 3 3
45 in Fig. 1; Fig. 4, a similar view to Fig. 3 on line 4 4 in Fig. 1; Fig. 5, a vertical longitudinal section through one end of the swing-motion center on line 5 5 in Fig. 1. Fig. 6
50 is a top plan, to reduced scale, of a modification of the swing-motion center, and Fig. 7

a vertical longitudinal section thereof on line 7 7 in Fig. 6.

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

My improved car-truck swing-motion center consists, preferably, of two beams or girders *a a'*, which cross each other diagonally in the middle and span the middle wheel-axle *b* of the truck A thereat, the intersecting portions of the beams *a a'* bearing one on the
55 other and preferably secured together by bolts 1, which pass vertically through lugs 2 3, formed, respectively, on the beams *a a'*, the whole constituting, practically, a single spring-beam B, having its outer free ends 4, 65
60 which are preferably disconnected, adapted to bear upon the elliptic bearing-springs *c*, for which purpose the under sides of the end portions 4 are formed with recesses or pockets 5, Figs. 2 and 5, which receive the spring-
70 bands 6 in a similar manner to the ordinary spring-beams. Each end 4 of the beams *a a'* is preferably formed laterally with a horizontal seating 7, having an upright end and
75 outside flange 8 9, respectively, and on the seatings 7 are secured the feet 10 of the side bearings *d*, by bolts 11, in a similar manner to the attachment of the side bearings to the ordinary spring-beams. The end flanges 8
80 are the equivalents of and perform the same function as the separate chafing-plates attached to the ordinary spring-beams, in combination with the transom chafing-plates 12.

The middle portion of the uppermost beam *a*, or that portion bearing upon the beam *a'*,
85 is formed with a concavity 13, from which projects upwardly a central circular hub 14, the concavity 13 and hub 14 constituting the ordinarily-shaped truck center-plate C for engagement with the corresponding car-body
90 center-plate in the usual well-known manner. Through the hub 14 is a vertical opening 15 for the passage of the usual king or center-bolt. (Not shown.)

The bodies of the beams *a a'* may be of
95 any desired section and configuration. In the present case the beam *a* is preferably channel-shaped in cross-section, as shown in Fig. 3, and the beam *a'* H-shaped, as shown in Fig. 4. The beam *a'*, with its end seat-
100

ings 7, flanges (or chafing-plates) 8 9, and lugs 2, and the beam a' , with its end seatings 7, flanges 8 9, lugs 3, and the center-plate C are preferably integral castings, respectively; or
5 in lieu of two separate beams $a a'$, the spring-beam B, with its appendages, as above described, may be a single casting B', integral throughout, as shown in Figs. 5 and 6.

The transom chafing-plates 12, the elliptic
10 bearing-springs c , the spring-planks e , and all other parts of the truck are of the ordinary well-known construction and need no further description.

By this invention the center-bearing beam
15 and the center-bearing arch-bars, with their bolts or fastenings, are dispensed with, thereby simplifying the construction of the swing-motion center and producing a strong inflexible structure which is practically unaffected
20 by temperature and ordinary strains and retains its shape and normal level, thereby allowing the free play of the truck under all conditions of running.

What I claim as my invention, and desire to secure by Letters Patent, is— 25

1. In a passenger-car truck, a swing-motion center, consisting of a beam spanning the middle axle of the truck, and resting on the elliptic bearing-springs, the said beam having the side bearings attached thereto, and hav- 30 ing an integral center-plate, and integral chafing-plates, substantially as described.

2. In a passenger-car truck, a swing-motion center, consisting of two beams crossing each other and spanning the middle axle of the 35 truck, the said beams resting on the elliptic bearing-springs and having the side bearings attached thereto, one of the said beams having the center-plate integral therewith, substantially as described.

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