(No Model.)

3 Sheets—Sheet 1

# M. B. SCHAFFER.

## CAR TRUCK.

No. 603,457. Patented May 3, 1898.

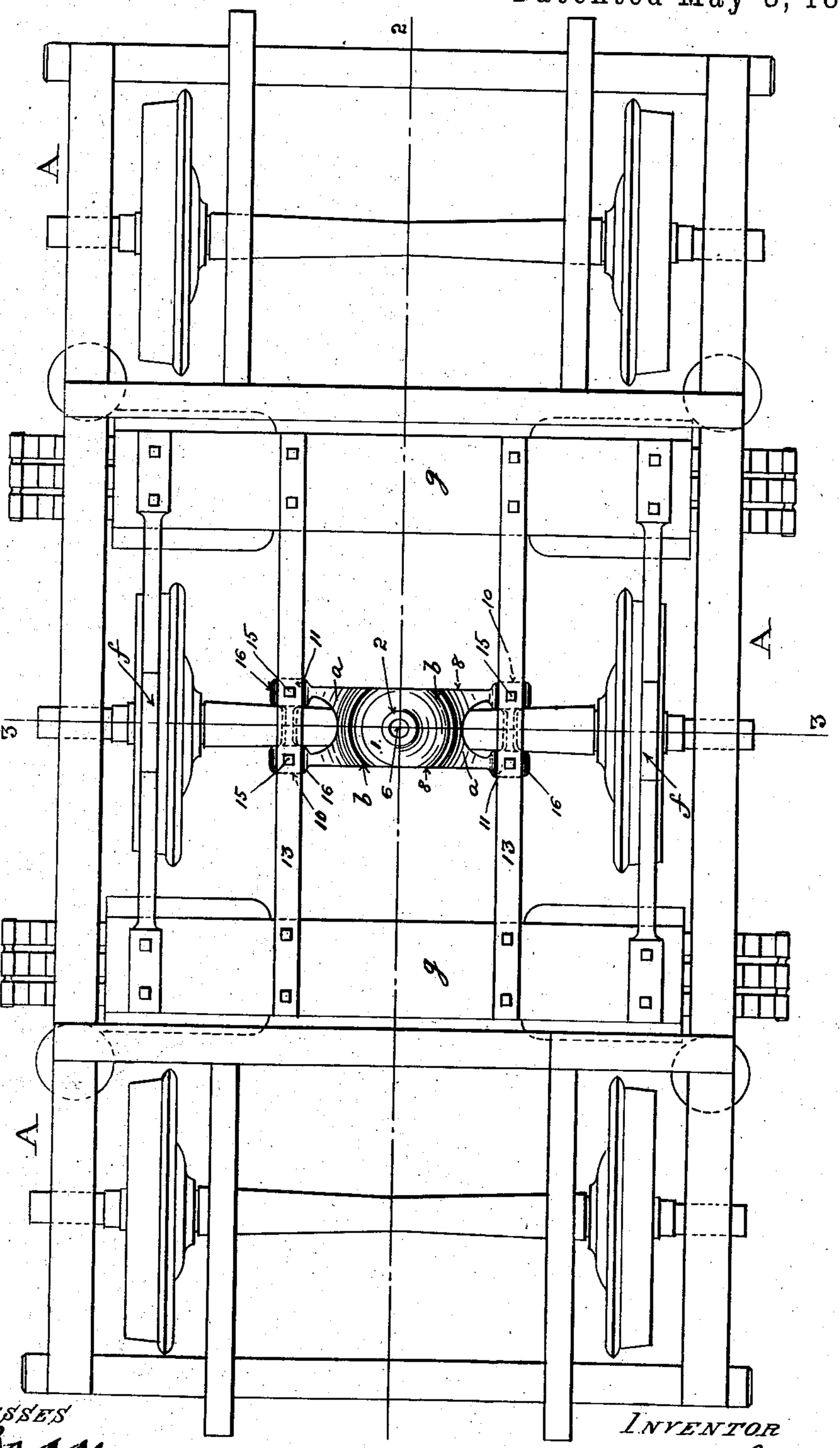


Fig 1

WITNESSES

J. C. Boggs

S. C. Green

INVENTOR

Morse B. Schaffer

By Edward W. Turnbull

His Atty

(No Model.)

3 Sheets—Sheet 2.

# M. B. SCHAFFER.

## CAR TRUCK.

No. 603,457. Patented May 3, 1898.

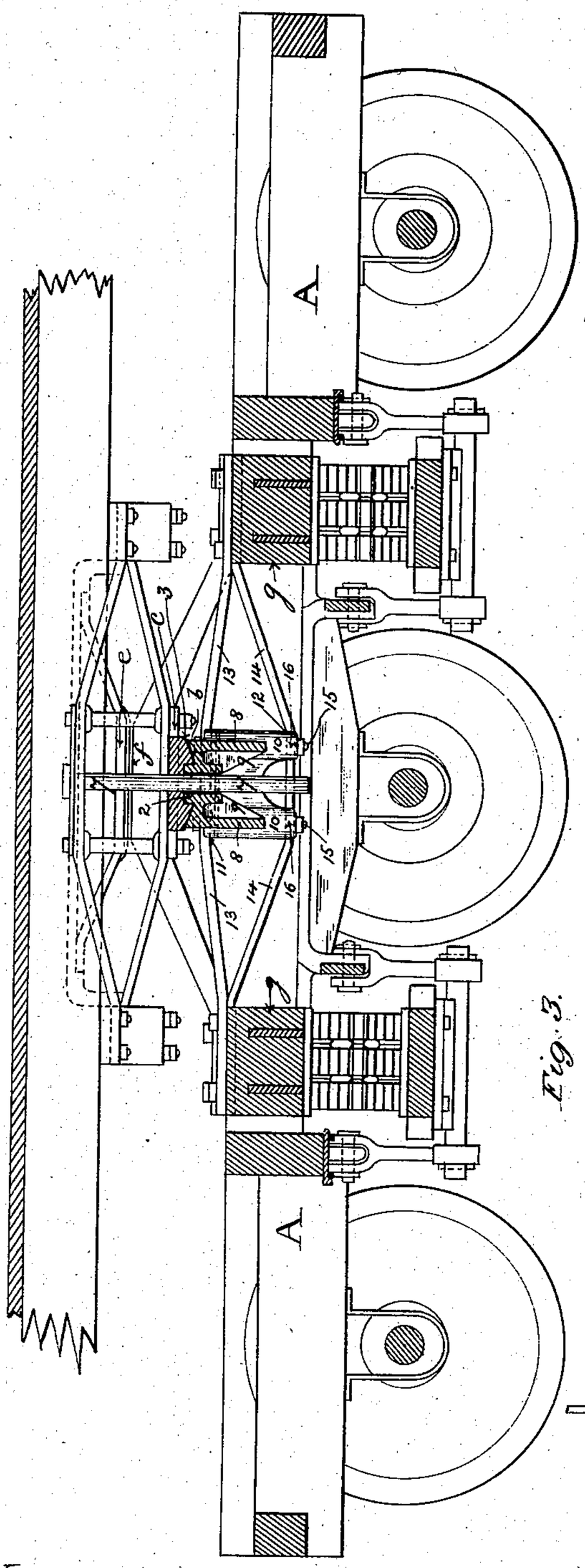


Fig. 2.

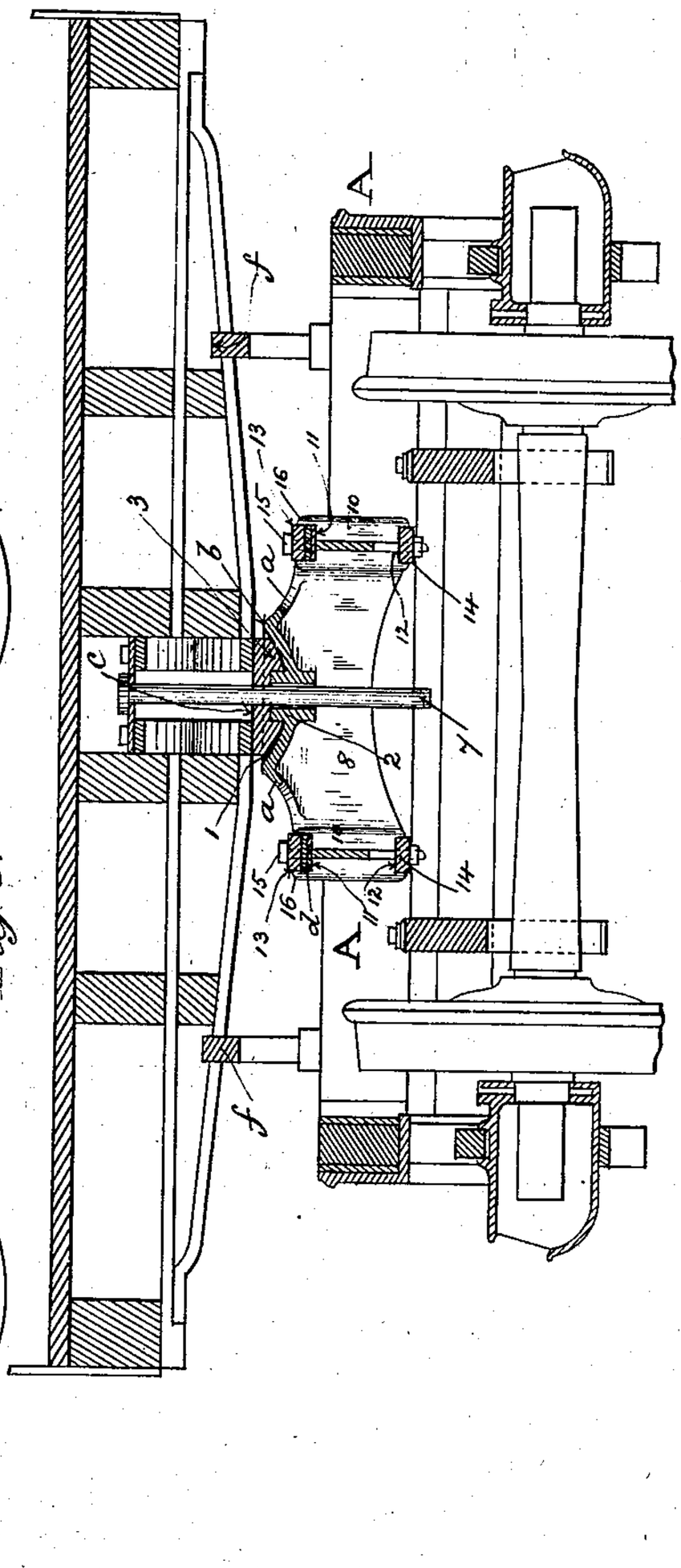


Fig. 3.

Witnesses
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S. Gleason

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His Atty

(No Model.) 3 Sheets—Sheet 3.

# M. B. SCHAFFER.

## CAR TRUCK.

No. 603,457. Patented May 3, 1898.

Fig. 4.

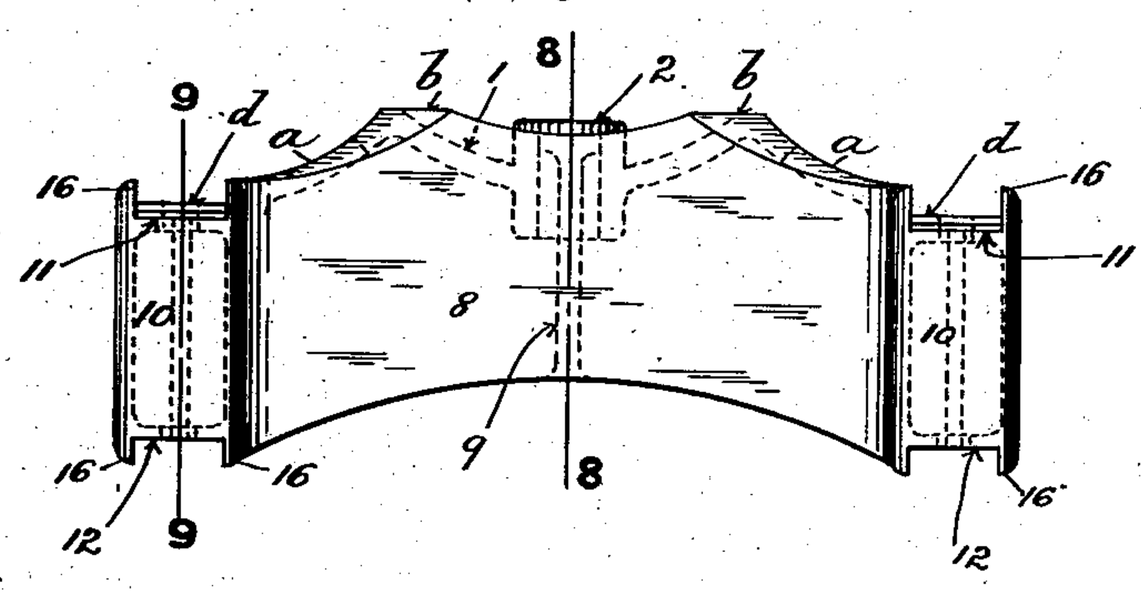



Fig. 6.

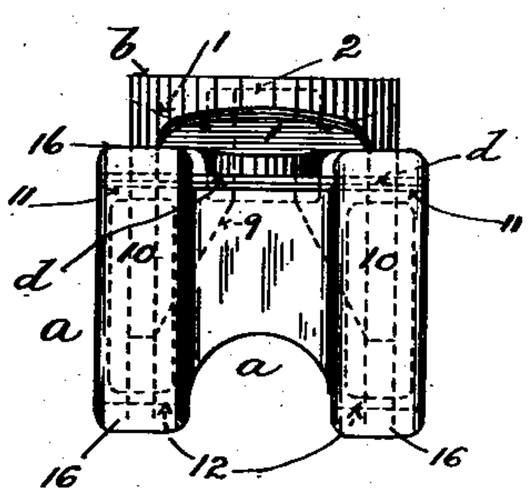



Fig. 5.

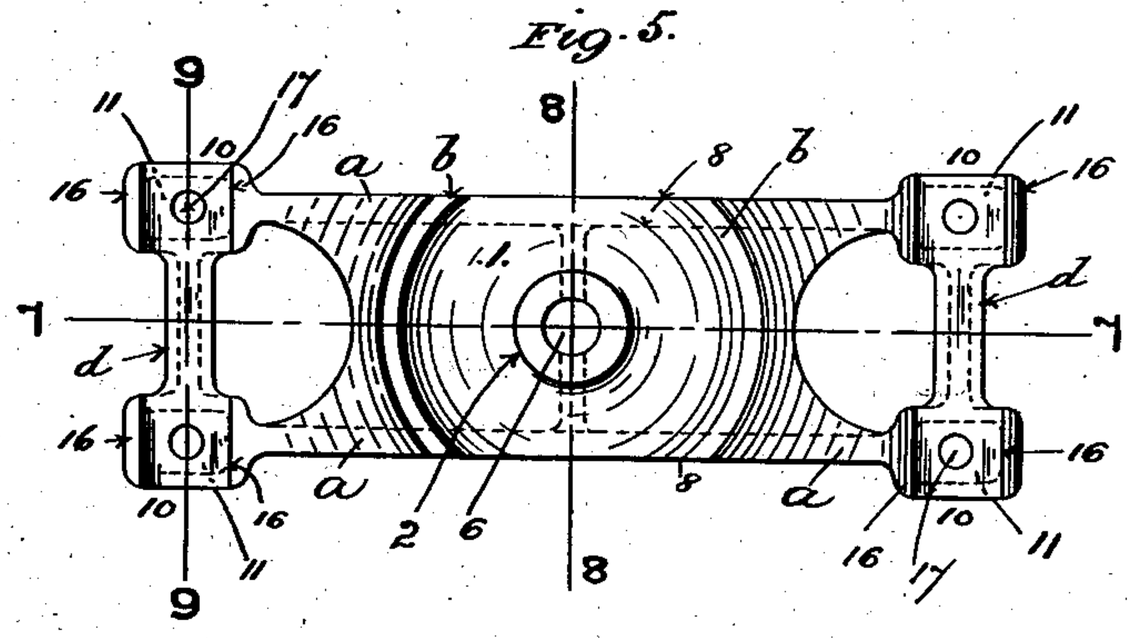



Fig. 8.

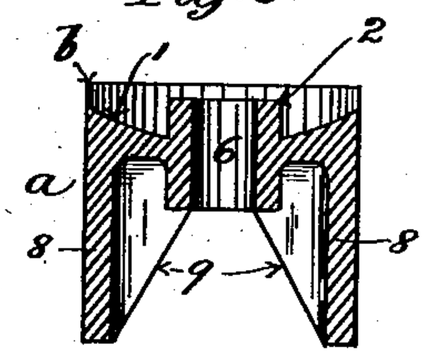



Fig. 7.

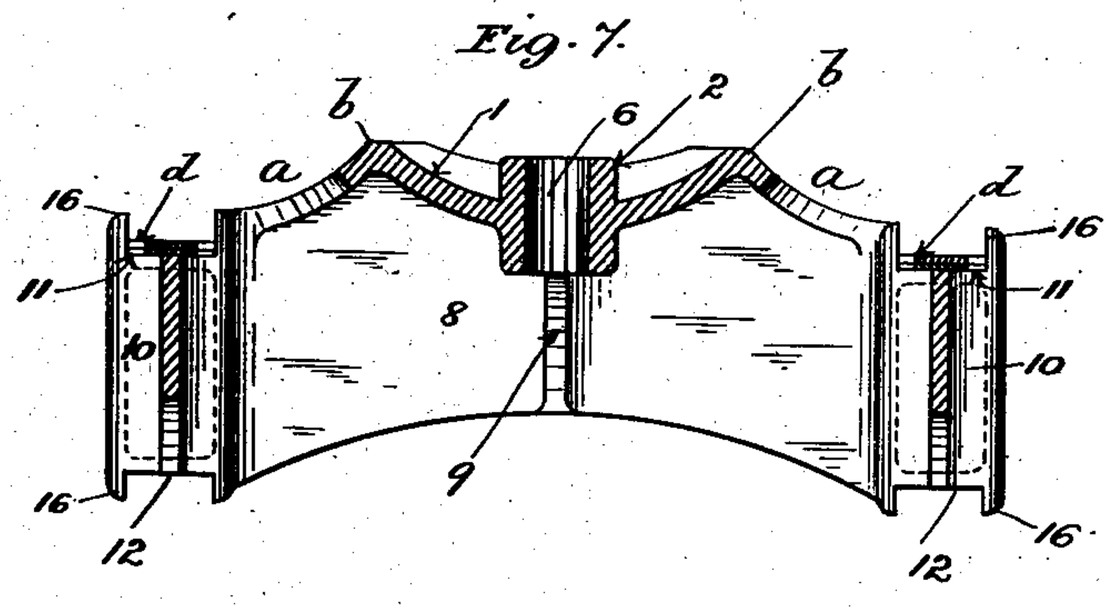



Fig. 9.

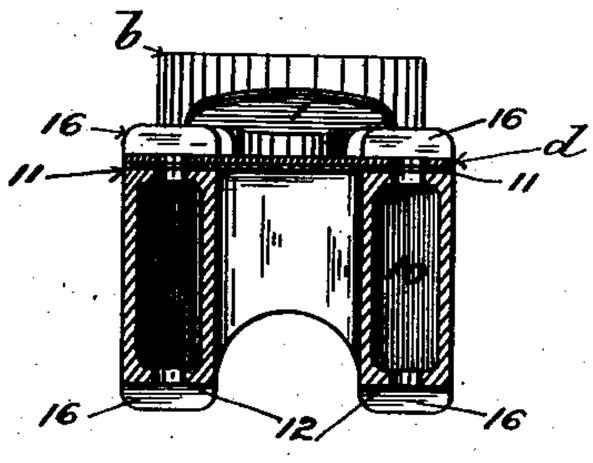
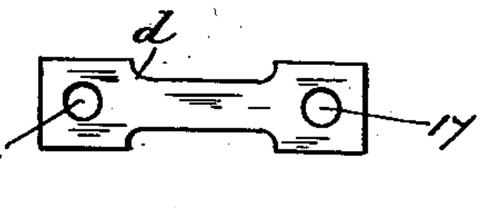



Fig. 10.




WITNESSES

J. C. Bagg

S. C. Green

INVENTOR

Morse B. Schaffer

By Edward W. Turrell

his atty

# UNITED STATES PATENT OFFICE.

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

## CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 603,457, dated May 3, 1898.

Application filed June 12, 1897. Serial No. 640,428. (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-Trucks, of which the following is a specification.

My invention relates to the center plate and the center-bearing beam or block of a six-wheel passenger-car truck.

Usually the center-bearing beam is made of wood combined with stiffening plates or bars of iron, which are inserted longitudinally sandwichwise in the beam and secured thereto by bolts. To the center-bearing beam the center plate is secured by bolts. By this construction the center-bearing beam shrinks and splits and becomes warped, thereby causing the car-body to drop and bear upon the side bearings, which prevents the free play of the trucks.

The object of my invention is to dispense with the use of wood and its combined parts and fastenings of iron in the construction of the center-bearing beam and center plate and to provide a strong, inflexible, and durable center-bearing beam and center plate integral throughout.

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

Figure 1 is a plan of my improved center-bearing beam and center plate as applied to a six-wheel passenger-car truck; Fig. 2, a longitudinal vertical section thereof taken on line 2 2 in Fig. 1, showing the combined parts of the car-body; Fig. 3, a transverse section thereof taken on line 3 3 in Fig. 1, showing the combined parts of the car-body; Fig. 4, a side view, to enlarged scale, of the center-bearing beam and center plate seen in Figs. 1, 2, and 3; Figs. 5 and 6, top plan and end view thereof, respectively; Figs. 7, 8, and 9, vertical sections through the center-bearing beam and center plate on lines 7 7, 8 8, and 9 9, respectively, in Figs. 4 and 5; and Fig. 10, a detached plan of one of the shimming-plates seen edgewise in Figs. 3, 4, 5, 6, 7, and 9, like letters and numerals of reference denoting like parts in all the figures.

Referring to Figs. 1, 2, and 3, A represents a six-wheel passenger-car truck having my improved center-bearing beam *a* and center plate *b* applied thereto, but otherwise similar in all its parts to an ordinary six-wheel passenger-car truck.

My improved center-bearing beam *a* and center plate *b*, as shown particularly in detail in Figs. 4, 5, 6, 7, 8, and 9, in lieu of being separate parts bolted together, as in the ordinary construction, are combined in a single piece composed, preferably, of cast-steel having on top a concavity 1, from which projects upwardly a central circular hub 2, the concavity 1 and hub 2 constituting the truck center plate *b* for engagement with the corresponding convex portion 3 and central recess 4, respectively, of the car-body center plate *c*, as in the ordinary construction of center plates. Through the recess 4 and hub 2 of the center plates *c b* are holes 5 6, respectively, through which passes the king-bolt 7 in the usual manner.

The body of the center-bearing beam and center plate *a b* may be of any desired section and configuration, such as an inverted-U shape in cross-section, as shown, the parallel sides 8 of the body having strengthening-brackets 9 and having, preferably, at each end, respectively, a rectangular box-shaped columnar enlargement 10, which is closed at the top and bottom to form bearings 11 12, respectively, for the top and bottom center-bearing arch-bars 13 14, which carry the center-bearing beam and center plate *a b* and are secured to the enlargements 10 by the bolts 15, which pass vertically through the arch-bars 13 14 and enlargements 10, as shown. Each bearing 11 12 is formed longitudinally with two opposite side flanges 16 for laterally holding the arch-bars 13 14 in position.

For taking up the wear of the center plates *b c* and the settling of the car-body, due to the sagging or set of the arch-bars, I use preferably two or more shimming or adjusting plates *d*, of iron and of varying thickness, which initially are assembled and placed between the top bearings 11 and the top center-bearing arch-bars 13, and in that position support the car-body at its normal height or so that the body side bearings *e* are clear of

the truck side bearings *f*, as seen in Fig. 2. As the car-body drops one of the shimming-plates *d* is removed from each top bearing 11 and placed between the bottom bearings 12 and the bottom center-bearing arch-bars 14, thereby lowering the arch-bars 13 14 and with them the spring-beams *g* and truck side bearings *f*, and so restoring the proper clearance between the side bearings *e f*. On further settling of the car-body another shimming-plate *d* is removed from between the top bearings 11 and arch-bars 13 and placed with the first-named plate *d* between the bottom bearings 12 and arch-bars 14, thereby still further lowering the truck side bearings *f* and so on as often as necessary to adjust the levels of the side bearings *e f*.

As shown in the drawings, the bolts 15 preferably pass through holes 17 therefor in the shimming-plates *d*, whereby the plates *d* are firmly held in position.

The various parts hereinbefore specified—to wit, the center-bearing beam *a*, having the bearings 11 12 and flanges 16 for the arch-bars 13 14 and having the strengthening-brackets 9, with the center plate *b*, having the hub 2—are integral throughout, the whole forming a strong inflexible structure without the use of separate stiffening-pieces, bolts, and fastenings.

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

1. In a car-truck, a center-bearing beam having integral therewith the center plate and at the ends the columnar enlargements 10 formed with bearings 11 and 12.

2. In a car-truck a transverse center-bearing beam having integral therewith the center plate and at the ends the columnar enlargements 10 formed with bearings 11 and 12, combined with the longitudinal arch-bars and the adjusting-plates in said bearings.

3. In a six-wheel passenger-car truck, the combination with the spring-beam having the side bearings secured thereto, of a center-bearing beam having its center plate integral therewith, and having integral therewith at its ends columnar enlargements formed with bearings, and the center-bearing arch-bars engaging said bearings and connected with the spring-beams.

MORSE B. SCHAFFER.

Witnesses:
MAGGIE B. SCHAFFER,
EDWARD W. FURRELL.