

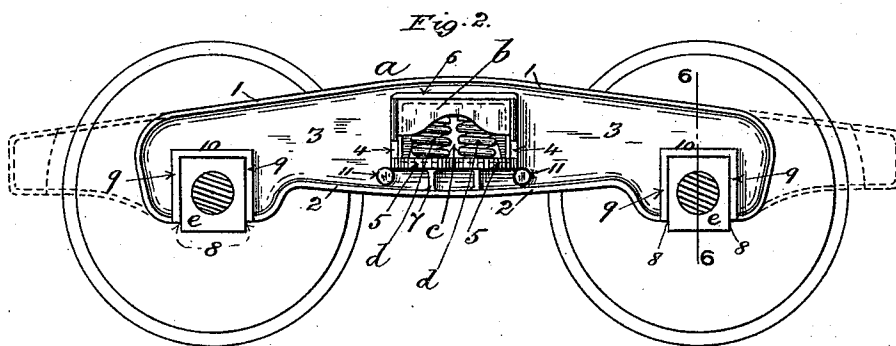
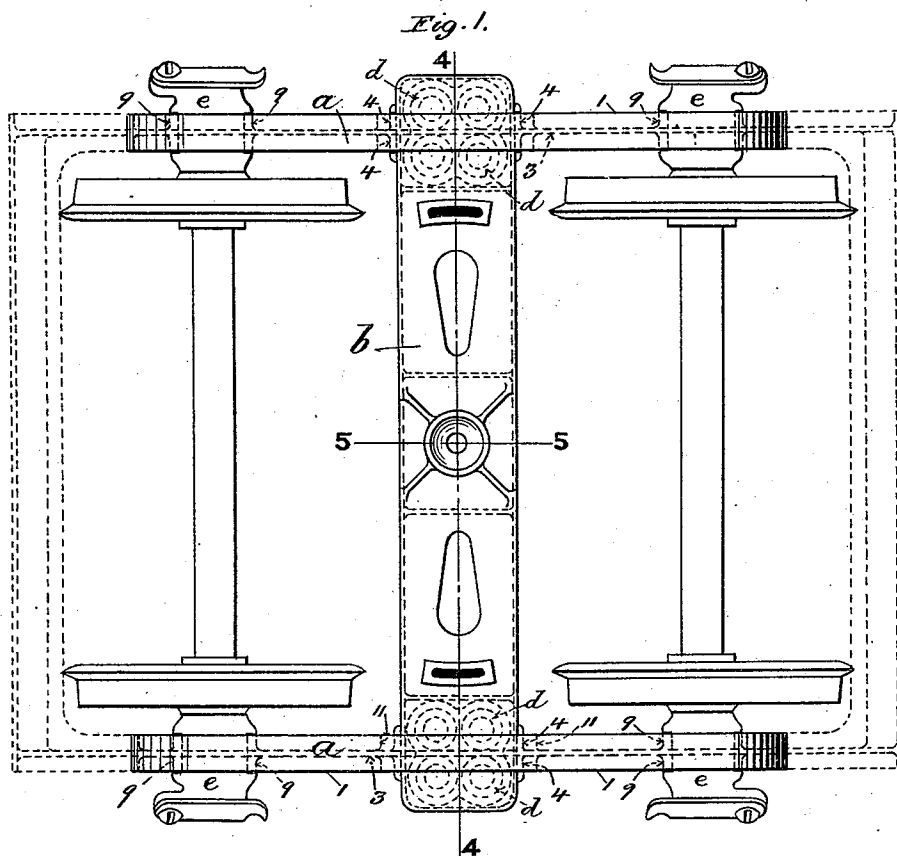
(No Model.)

3 Sheets—Sheet 1.

E. F. GOLTRA.
CAR TRUCK.

No. 552,493.

Patented Dec. 31, 1895.



WITNESSES

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Geo. W. Shippen

INVENTOR

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Fig. 3.

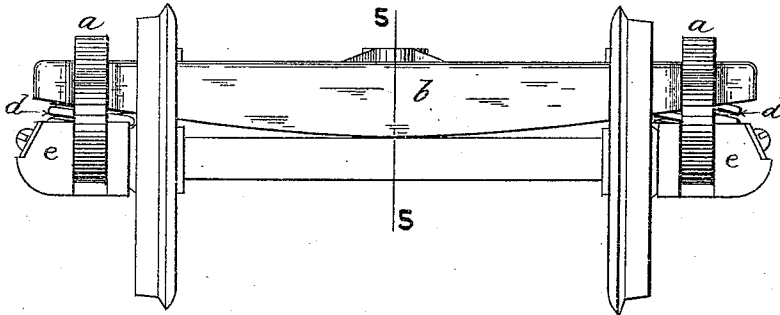


Fig. 4.

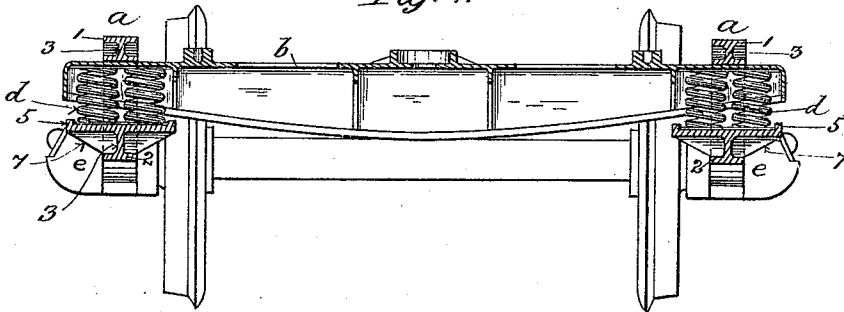


Fig. 5.

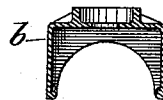
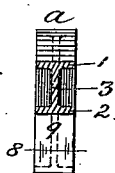


Fig. 6.



WITNESSES

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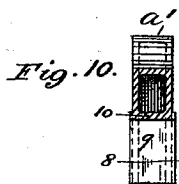
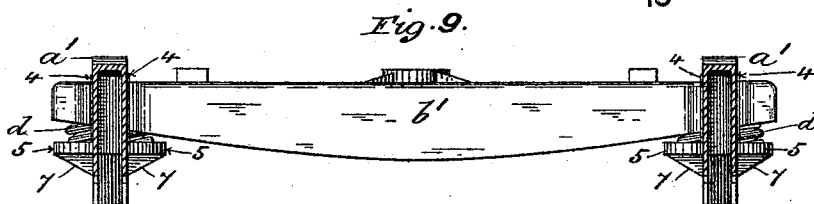
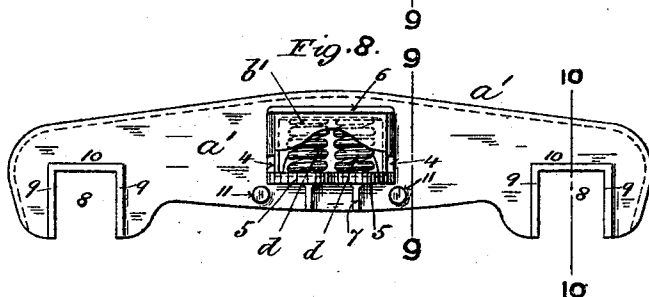
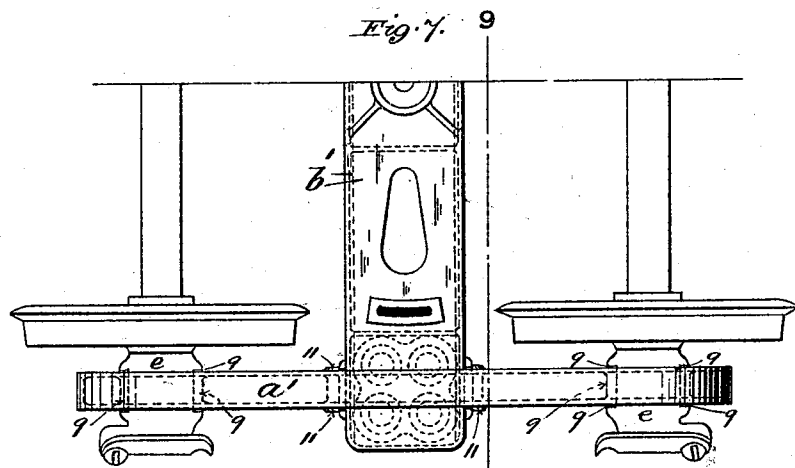
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3 Sheets—Sheet 3.

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WITNESSES

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UNITED STATES PATENT OFFICE.

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CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 552,493, dated December 31, 1895.

Application filed November 6, 1894. Serial No. 528,112. (No model.)

To all whom it may concern:

Be it known that I, EDWARD F. GOLTRA, 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.

This invention relates to the frame of the truck. In an ordinary car-truck of the open-end class the side frames which carry the bolster and axle-boxes are composed of the bolster-columns or guide-bars, the arch-bars, pedestal tie-bars, and bolster-spring seats, which are separate constructions, secured together by bolts or other fasteners.

My invention has for its object to obviate this separate construction and interjoining, and to provide a simple, compact, and inexpensive, preferably metallic, car-truck frame having the sides, with their appurtenances, formed respectively in one piece, or integral throughout, as hereinafter particularly described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 is a plan of my improved car-truck frame; Figs. 2 and 3, side and end elevations thereof; Fig. 4, a transverse section through the side frames and a longitudinal section through the bolster on line 4 4 in Figs. 1 and 2; Fig. 5, a cross-section through the bolster on line 5 5 in Fig. 1, and Fig. 6 a cross-section through one of the side frames on line 6 6 in Fig. 2. Fig. 7 is a half plan showing a modified construction of the side frames; Fig. 8, a side elevation thereof with the bolster in end elevation; Fig. 9, a transverse section through the side frames on line 9 9 in Figs. 7 and 8, with the bolster in side elevation; and Fig. 10, a cross-section through one of the side frames on line 10 10 in Fig. 8.

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

Referring to Figs. 1, 2, 3, 4, 5, and 6, *a* represents the side frames of the truck, which, in the present construction, is of the open-end type and carries the bolster *b*, arranged relatively thereto in the usual position. The bolster *b* may be of the ordinary kind, but preferably metallic in the form shown.

Each side frame *a*, with its appurtenances, is preferably made of cast-steel and integral

throughout, the metal being properly distributed through its various parts conformably to their required strength, and the metallurgic conditions imposed in the founding of steel for insuring a sound, homogeneous, and regularly-shaped casting adapted in every respect to its intended use.

Each side frame *a* corresponds in length (or thereabout) and position to the arch-bars, or entire side frame, of an ordinary car-truck and is in the present instance I-shaped in cross-section, having an upper flange 1, lower flange 2, and central vertical web 3, the frame *a* being of any desired configuration, but preferably that shown in Fig. 2. Through the web 3, at the middle of the frame *a*, is formed a rectangular opening *c*, through which projects the adjacent end portion of the bolster *b*, the upright flanged sides 4 of the opening *c* serving as columns or guides for the vertically-movable bolster *b*, while the bottom 5 of the opening *c* projects on each side of the frame *a*, and is adapted on its top face to form a spring-seat for the bolster-springs *d*, which bear at their upper ends against the under side of the bolster *b* and normally press the latter against the top 6 of the opening *c*.

7 are corner brackets or strengthening-ribs, which connect the projecting portions of the seat 5 with the web 3 and lower flange 2. In the side frame *a*, near each end thereof, is formed a vertically-arranged jaw or holder 8, the sides 9 and upper closed ends 10 of which may be of the same width and thickness as the lower flange 2. Within the jaws or holders 8 are fitted the axle-boxes *e*, which are thereby held securely in place. On the central web 3, adjacent to the bolster-spring seat 5, are formed bosses 11, as a provision for the ends of cross-stay bolts, (not shown,) which may be used if desired for connecting the two side frames *a* together.

It is here to be noted that each side frame *a*, comprising the bolster-columns or guide-bars 4, spring-seat 5, the sides and top 9 10 of the jaws or holders 8, strengthening-ribs 7, and bosses 11, (or other provisions,) is cast or otherwise formed in one piece, or integral throughout, so that no bolts or other fastenings are required, whereby the car-truck, so far as it relates to these parts, is greatly sim-

plified, besides being more compact and less liable to derangement than when made up of separate parts, depending upon bolts or fastenings for its stability, as in the side frames of an ordinary car-truck.

In the modification of my invention shown by Figs. 7, 8, 9, and 10, the side frames *a'* are of an inverted-U shape in cross-section, but are otherwise the same as the side frames *a* before described; or the side frames may be of any other preferred shape in cross-section, such as H or box shaped, and I desire it to be understood that I do not limit myself to the particular shape of the side frames of the truck in cross-section, nor to the general configuration thereof as described, and shown on the drawings, as these may be varied according to what may be determined by experiment or practice as the best or preferable form for fulfilling the conditions imposed by strains, the exigencies of founding, or other causes; nor do I restrict myself to cast-steel as the material to be used in the formation of the frames, as other metal may prove suitable therefor, and either cast, forged, or stamped into the desired shape.

Moreover, although the above description relates particularly to a car-truck with open ends, the invention is also applicable to a car-truck having the side frames connected to-

gether at the ends by transverse beams, in which case the sides and ends constitute an entire frame and are cast or otherwise formed integrally throughout, as indicated by dotted lines on the right and left in Figs. 1 and 2.

I claim—

1. In a car truck, the combination with the bolster, and the bolster springs, of the side frames, having respectively the bolster-guides or columns, the spring seats, and axle-box holders, each side frame and its said parts being integral throughout, substantially as described.

2. In a car truck the combination with the bolster and the bolster springs, of the frame having the bolster-guides or columns, the spring seats and axle-box holders, the frame and its said parts being integral throughout, substantially as described.

3. A car truck frame having the bolster-guides or columns, the spring seats, and axle-box holders, the frame and its said parts being integral throughout, substantially as described.

EDWARD F. GOLTRA.

Witnesses:

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