No. 626,552. Patented June 6, 1899.

G. C. MURRAY.

CAR TRUCK.

(Application filed Dec. 27, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

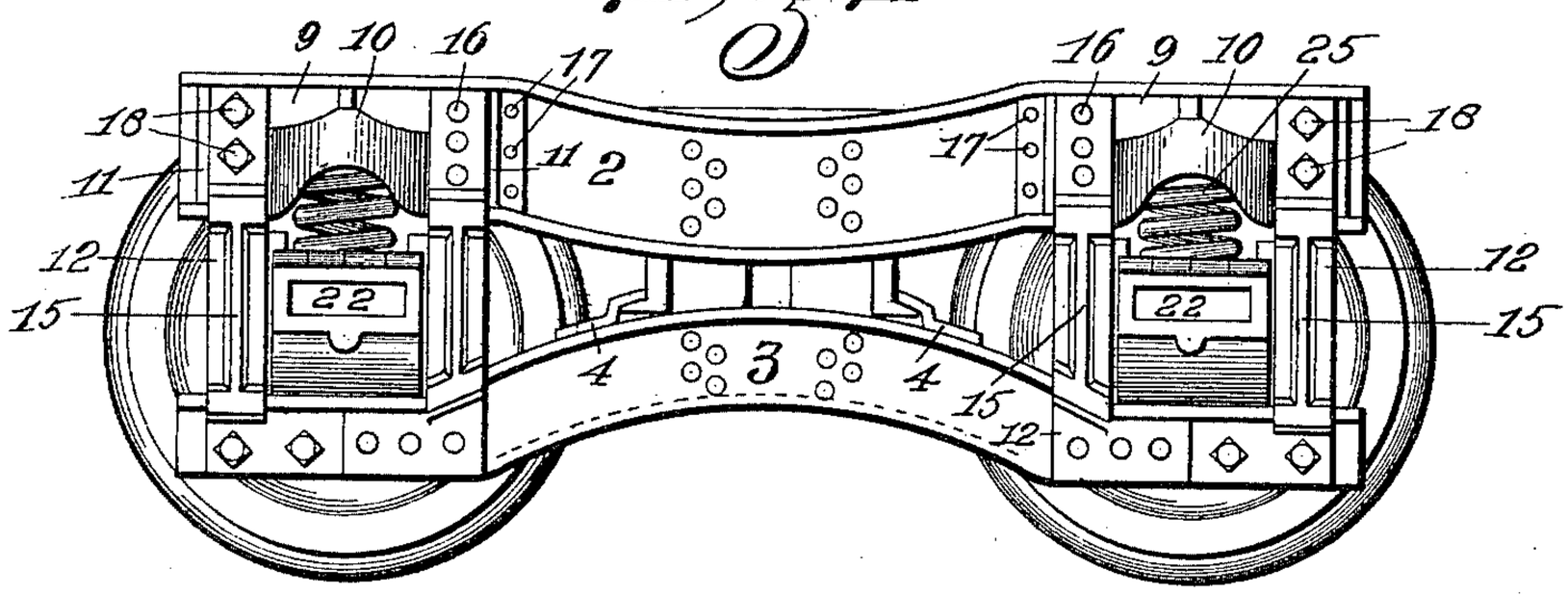
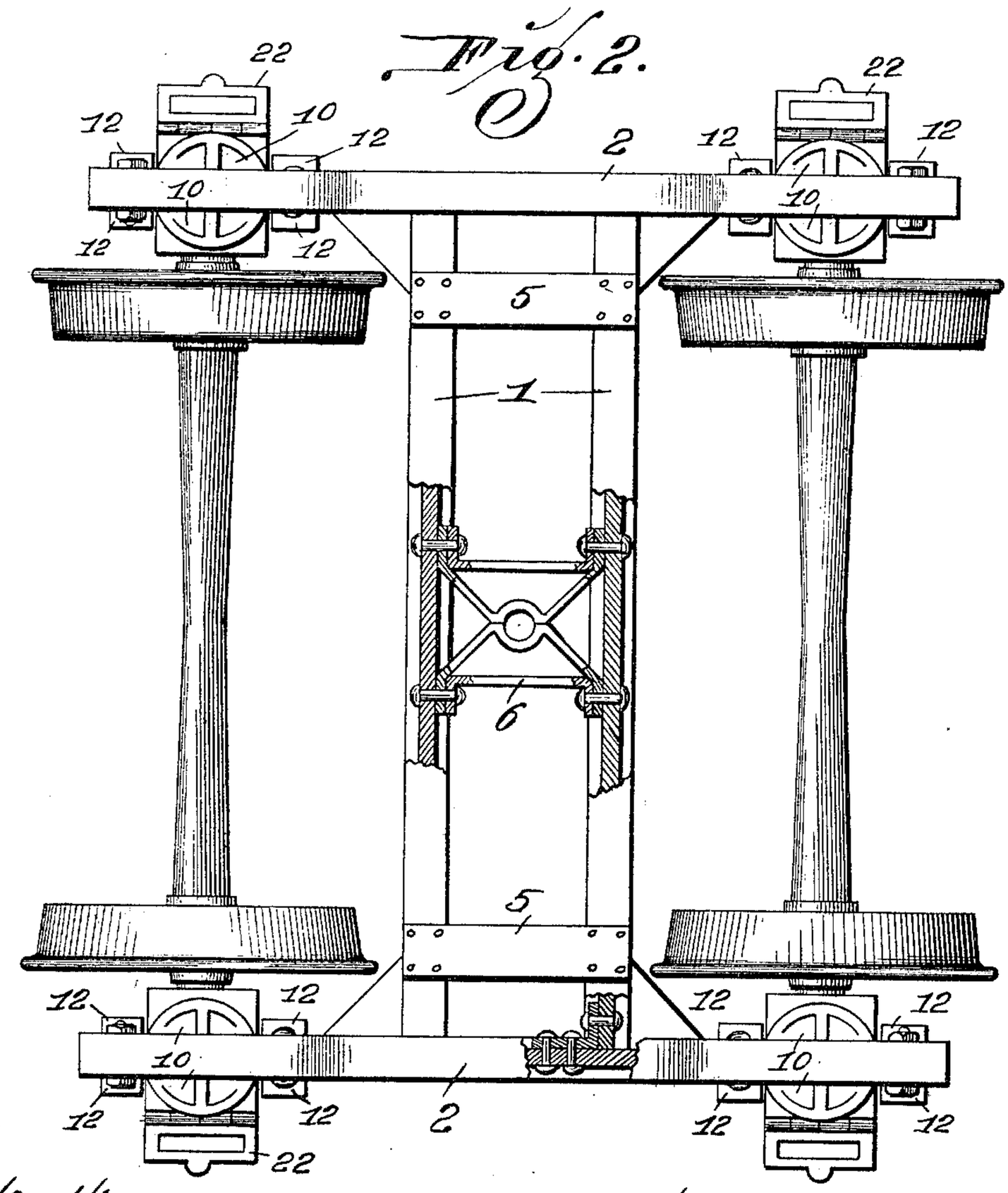


Fig. 2.



Attest:
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Inventor:
George C. Murray:—
By Higdon & Longan, Atty's.

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Fig. 3.

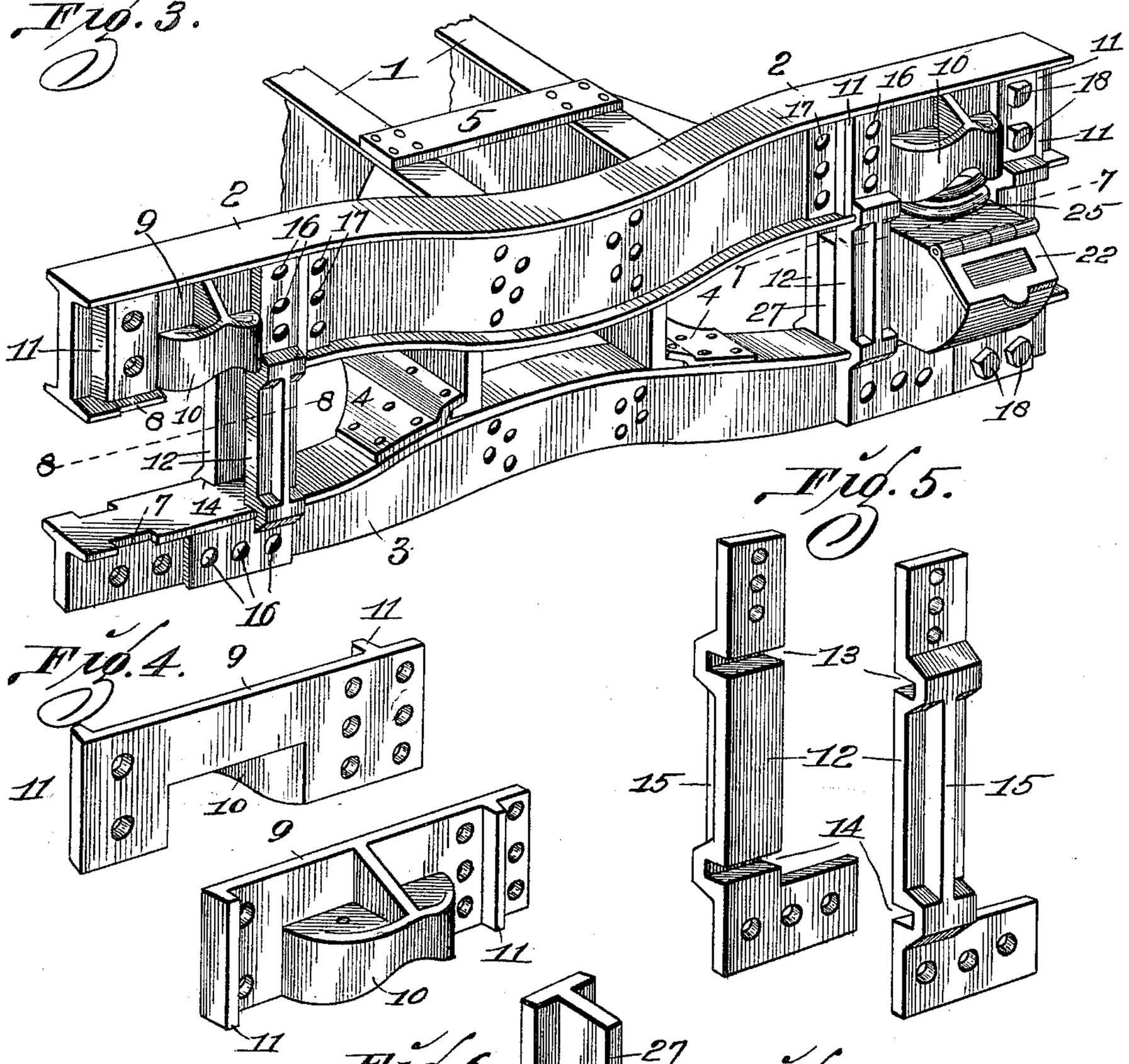


Fig. 4.

Fig. 5.

Fig. 6.

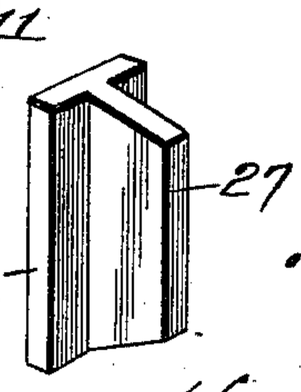


Fig. 7.

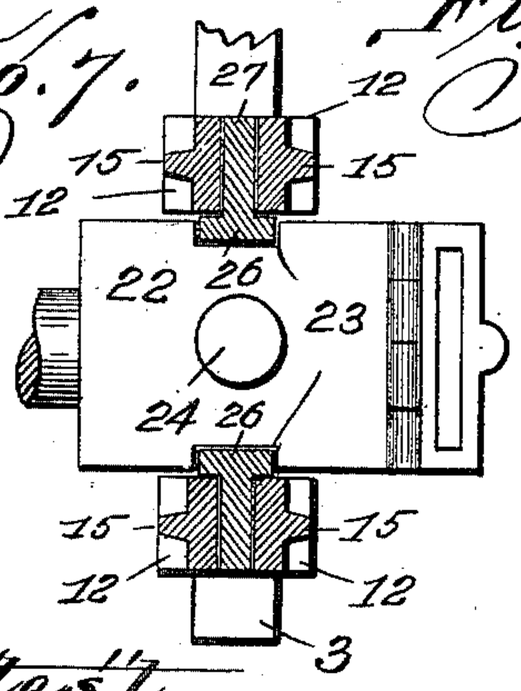


Fig. 8.

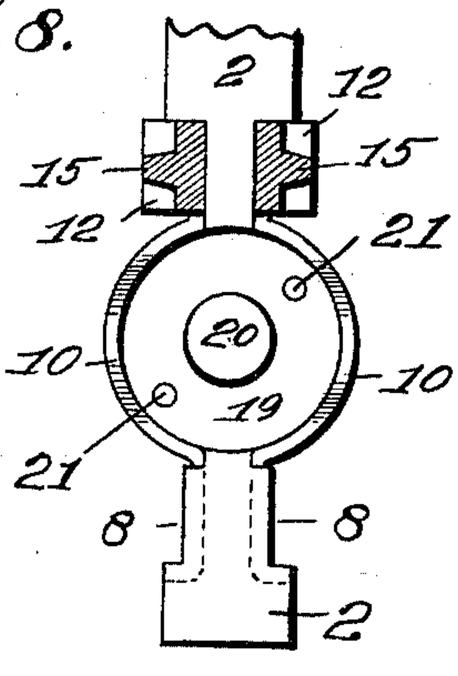
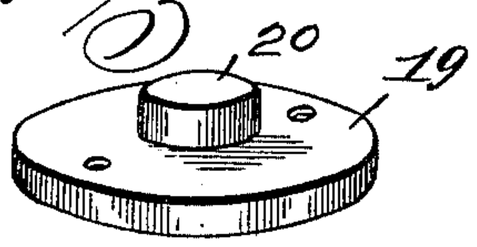


Fig. 9.



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UNITED STATES PATENT OFFICE.

GEORGE C. MURRAY, OF ST. LOUIS, MISSOURI.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 626,552, dated June 6, 1899.

Application filed December 27, 1898. Serial No. 700,455. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. MURRAY, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Car-Trucks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to car-trucks; and it consists of the novel construction, combination, and arrangement of parts hereinafter described and claimed.

Figure 1 is a side elevation of my improved car-truck. Fig. 2 is a plan view thereof. Fig. 3 is a view in perspective of one of the side frames of my improved car-truck. Fig. 4 is a view in perspective of the mating plates which form the housing for the upper end of one of the springs of the truck. Fig. 5 is a view in perspective of a pair of mating journal-box guides. Fig. 6 is a view in perspective of one of the wearing-plates made use of in carrying out my invention. Fig. 7 is a horizontal sectional view taken approximately on the line 7 7 of Fig. 3. Fig. 8 is a horizontal sectional view taken approximately on the line 8 8 of Fig. 3 and looking upwardly. Fig. 9 is a view in perspective of a bearing-plate such as is located in the spring-housings.

In the construction of my improved car-truck I make use of a bolster or transom 1, which is preferably constructed of a pair of I-beams, to the ends of which are riveted or bolted the side frames of the truck. Each of these side frames comprises an I-beam 2, the center of which is depressed, together with the lower member 3, which is preferably a T-bar having its center arched, or said lower member may be an I-beam. As heretofore stated, the ends of the bolster 1 are secured to the side frames by rivets or bolts, and to further strengthen the frame of the truck so constructed clips 4 are riveted to the top of the T-bar 3 and to the flanges at the ends of the I-beams forming the transom or bolster 1.

Located upon top of the ends of the bolster or transom are the plates 5, on which the side bearings of the truck operate, and located at the center of the bolster or transom is a king-pin guide or seat 6, the same being securely riveted or bolted to the webs of the I-beams forming the bolster or transom.

Formed in the flanges of the T-bar 3, adjacent its ends, are the pairs of rectangular notches 7, and formed in the lower flanges of the I-beam 2, in alinement with said pairs of notches 7, are the pairs of notches 8, all of these notches extending approximately halfway through the width of the flange, and the balance of the flanges between the pairs of notches 8 in the I-beam 2 is removed, the purpose of which will be presently set forth. Seated upon the ends of the I-beams 2, one on each side thereof, are the plates 9, the same being of the same size and construction and equal in width to the web of said I-beam, with the outer faces of which plates are formed integral the semicircular casings 10, there being the vertically-arranged flanges 11 formed integral with the outer faces of the ends of said plates. When these plates are correctly positioned upon the web of the I-beam, the ends of the casings 10 coincide with the inner ends of the pair of notches 8, thus forming the circular housings for the upper ends of the springs.

The journal-box guides, (seen in Fig. 5,) a pair of which have their upper ends seated upon each end of the plates 9, comprise the vertical plates 12, in the upper ends of which plates are formed the oppositely-arranged notches 13, which pass into the pairs of notches 8 in the lower flange of the I-beam 2, which notches also engage upon the portions of the flanges between said notches and the outer faces of the plates 9. Formed in the inner faces of the lower ends of the plates 12 are the oppositely-arranged notches 14, which pass into the pairs of notches 7 in the flange of the T-bar 3 and engage upon the portions of the flange between the inner ends of said notches and the web of said T-bar. The outer faces of the plates 12 are provided with vertically-arranged strengthening-flanges 15, which extend between the material of said plates 12 surrounding the notches 13 and 14. The lower ends of the pair of plates 12 that is located adjacent the outer ends of the side frame are extended inwardly toward the center of said frame, while the lower ends of the

inner pair of plates 12 are extended outwardly to meet the extended inner ends of the outer pair of plates. The ends of the inner pair of vertical plates 12 are held together and to the inner ends of the plates 9 and to the webs of the I-beam 2 and T-bar 3 by the rivets 16, said plates 9 being held to the web of the I-beam 2 by the rivets 17. The outer pair of plates 12 are held to the ends of the plates 9 and to the web of the T-bar 3 by the bolts 18, the nuts for said bolts being upon the inside faces of the side frames.

Located within the spring-housings, composed of the mating casings 10, is a disk 19, the same being provided on its under side with a lug 20, said disk being held within said housing by the rivets 21, which pass through the top of the casings 10.

The journal-boxes 22 used in connection with my improved truck are of the ordinary construction and provided in their sides with the vertically-arranged groove 23, and formed integral with the top of each box is a circular lug 24, the usual helical coil-springs 25 being interposed between the journal-box and the plate 19 in the top of the spring-housing, the ends of said spring being seated upon the circular lugs 20 and 24.

The wearing-plates 26 engage in the vertical groove 23, formed in the sides of the journal-boxes, said wearing-plates being provided with integral rearwardly-projecting ribs 27, which are located between the pairs of journal-box guides.

By my improved construction a very strong, simple, and compact car-truck is produced, and whenever desired the bolts 18 at either or both ends of the truck may be quickly removed in order to take out the axle, wheels, and journal-boxes.

By making use of I-beams and T-bars for the side frames the construction of the truck is greatly simplified and cheapened, inasmuch as no large castings or specially-formed parts are required, and the entire truck may be assembled in any ordinary car-repair shop.

I claim—

1. In a car-truck, a bolster, a pair of I-beams having depressed centers and a pair of T-bars having arched centers, a pair of which I-beams and T-bars are rigidly secured to the ends of the bolster and to each other, substantially as specified.

2. In a car-truck, the combination with a bolster of side frames arranged at each end of said bolster, which side frames are composed of oppositely-arranged members, the upper one of which members has its center depressed and the lower one of which members has its center arched, said members being provided with flanges in which are formed vertically-alined notches, journal-boxes arranged between said members at points between the notches, pairs of journal-box guides arranged in the notches inside the journal-boxes and rigidly fixed to the members of the side frames, and pairs of journal-box guides arranged in the notches outside the journal-boxes, which last-mentioned journal-box guides are removably fixed to the members of the side frames, substantially as specified.

3. In a car-truck, a bolster, a side frame at each end of said bolster, which side frames are composed of an I-beam having a depressed center and a beam having an arched center, journal-box guides fixed to the ends of the beams, substantially as specified.

4. In a car-truck, a bolster, a side frame secured to each end of said bolster, which side frame is composed of an I-beam having a depressed center and a beam having an arched center, and pairs of oppositely-arranged journal-box guides secured to the ends of the beam, substantially as specified.

5. In a car-truck, a bolster, a side frame secured to each end of said bolster, which side frame is constructed of an I-beam having a depressed center and a beam having an arched center, there being vertically-alined notches formed in the flanges of the beams, and pairs of vertically-arranged journal-box guides located in said notches and fixed to the ends of the beams, substantially as specified.

6. In a car-truck, a bolster, a side frame fixed to each end of said bolster, which side frame is constructed of an I-beam having a depressed center and a T-bar having an arched center, there being vertically-alined notches formed in the lower flanges of the I-beam and the flange of the T-bar, pairs of plates located on the faces of the web of the I-beam at each end thereof, semicircular casings integral with said plates to form a spring-housing, and pairs of journal-box guides having their ends fixed to the ends of the I-beam and T-bar, substantially as specified.

7. In a car-truck, a bolster, a side frame fixed to each end of said bolster, which side frame is constructed of an I-beam having a depressed center and a T-bar having an arched center, there being vertically-alined notches formed in the lower flanges of the I-beam and the flange of the T-bar, pairs of plates located on the faces of the web of the I-beam at each end thereof, semicircular casings integral with said plates to form a spring-housing, pairs of journal-box guides having their ends fixed to the ends of the I-beam and T-bar, and wear-plates held between each pair of journal-box guides, substantially as specified.

8. In a car-truck, the combination with the members forming the side frames of said trucks, in the flanges of which members are formed vertically-alined notches, of the vertically-arranged journal-box guides, in which are formed notches which engage in the previously-mentioned notches, substantially as specified.

9. In a car-truck, the combination with the members forming the side frames thereof, of plates located upon the faces of the web of

the upper member of the side frame, the semicircular casings integral with each of said plates, the vertically-arranged flanges integral with the ends of said plates, and the vertically-arranged journal-box guides, the upper ends of which abut said vertical flanges, substantially as specified.

10. In a car-truck, a bolster, side frames secured to each end of said bolster, which side frames are composed of a pair of oppositely-arranged members, a pair of rectangular plates arranged upon the outer faces of the ends of the top pair of members, semicircular casings integral with the plates to form spring-housings, and vertically-arranged flanges formed integral with the ends of said plates, substantially as specified.

11. In a car-truck, a bolster, side frames secured to each end of said bolster, which side frames are composed of a pair of oppositely-arranged members, a pair of rectangular plates arranged upon the outer faces of the ends of the top pair of members, semicircular casings integral with the plates to form spring-housings, vertically-arranged flanges formed integral with the ends of said plates, disks occupying the tops of the housings so formed, and lugs formed integral with the under sides of said disks, substantially as specified.

12. In a car-truck, a bolster, a side frame secured to each end of said bolster, which side frames are composed of pairs of oppositely-arranged members, pairs of oppositely-arranged journal-box guides secured to the ends of the members composing the side frames, spring-housings arranged between the upper ends of the journal-box guides, and wear-plates held between each pair of journal-box guides, substantially as specified.

13. In a car-truck, a bolster, a side frame secured to each end of said bolster, which side frame is composed of a beam having a depressed center and a beam having an arched center, pairs of oppositely-arranged journal-box guides secured to the ends of the beams, spring-housings arranged between the upper ends of said journal-box guides, bearing-plates located within said spring-housings, and wear-plates arranged between each pair of journal-box guides, substantially as specified.

14. In a car-truck, a bolster, side frames secured to each end of said bolster, which side frames are composed of a pair of oppositely-arranged bars, a pair of rectangular plates arranged upon the outer faces of the ends of the top pair of members, semicircular casings integral with the plates to form spring-housings, vertically-arranged flanges formed integral with the ends of said plates, vertically-arranged journal-box guides fixed to the ends of the oppositely-arranged members and abutting the flanges formed on the rectangular plates, there being notches formed in portions of the oppositely-arranged members to receive said journal-box guides, bearing-plates located within the spring-housings, and wear-plates located between each pair of journal-box guides, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE C. MURRAY.

Witnesses:
M. P. SMITH,
A. J. MCCAULEY.