

No. 754,027.

PATENTED MAR. 8, 1904.

H. TESSEYMAN.

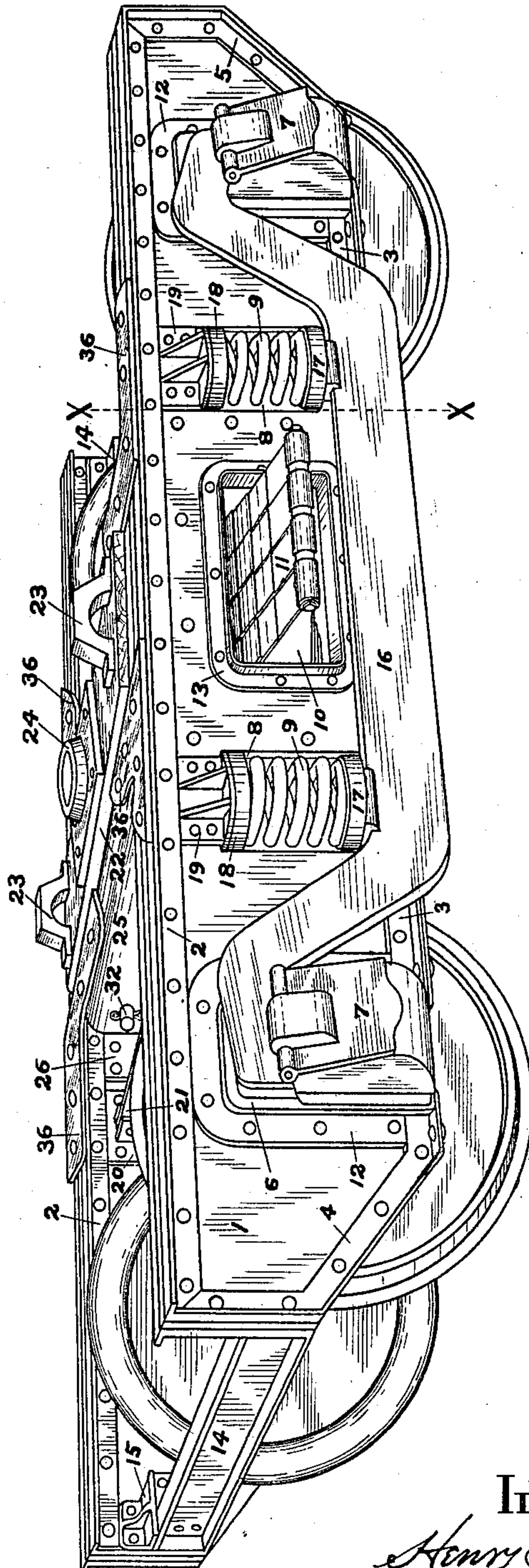
CAR TRUCK.

APPLICATION FILED JUNE 19, 1903.

NO MODEL

2 SHEETS—SHEET 1.

Fig 1.



Attest.

E. B. Lehman

Chas. E. Treld.

Inventor.

Henry Tesseyman
By J. H. J. J.
his Atty.

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CAR TRUCK.

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NO MODEL.

2 SHEETS—SHEET 2.

Fig 2.

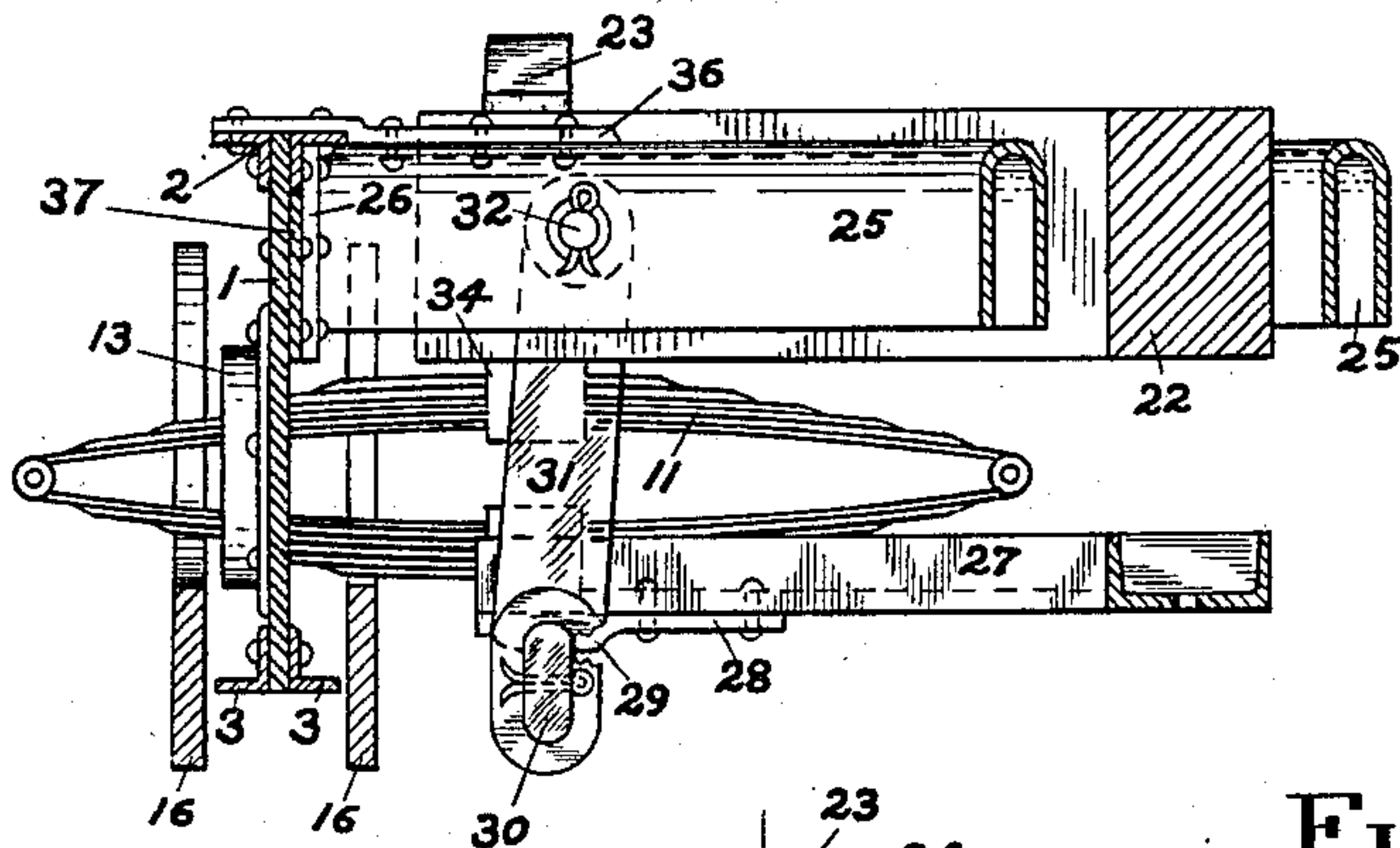


Fig 3.

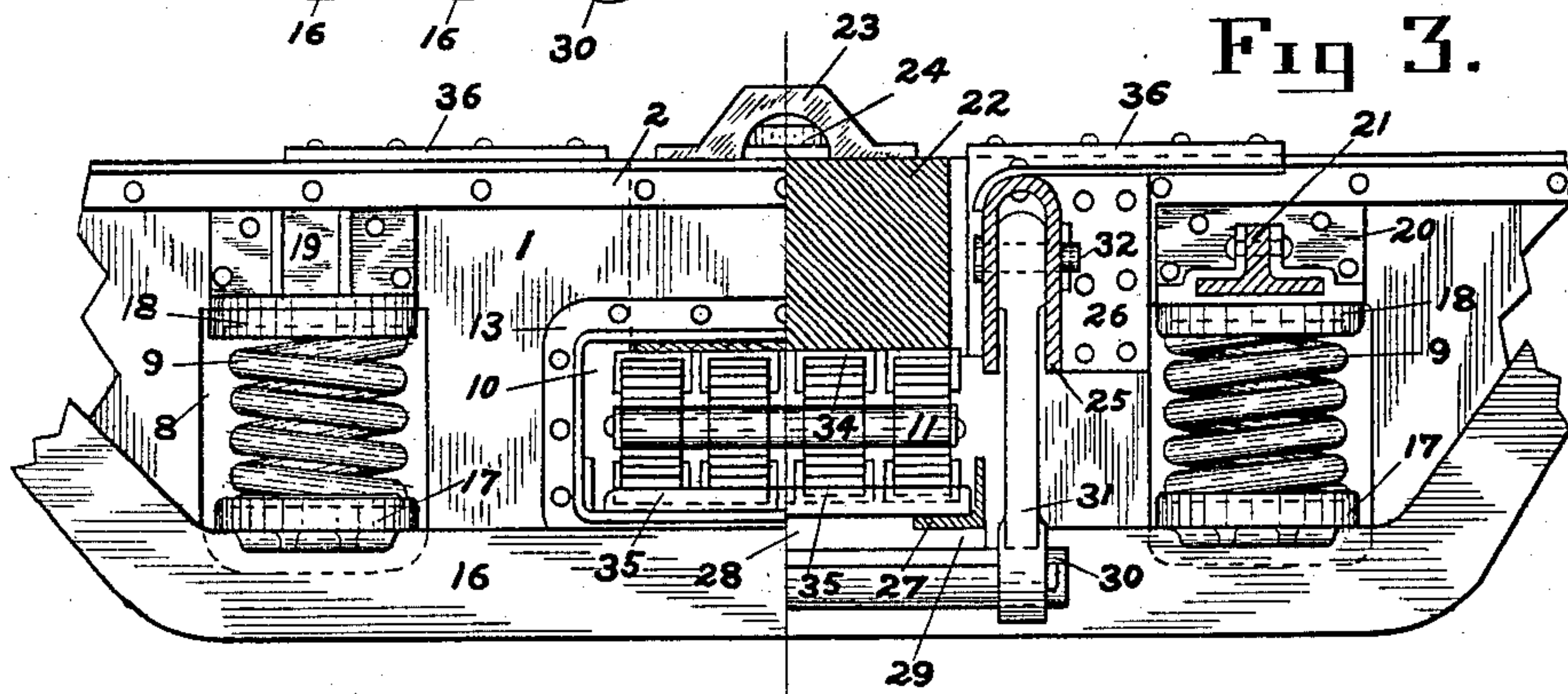


Fig 4.

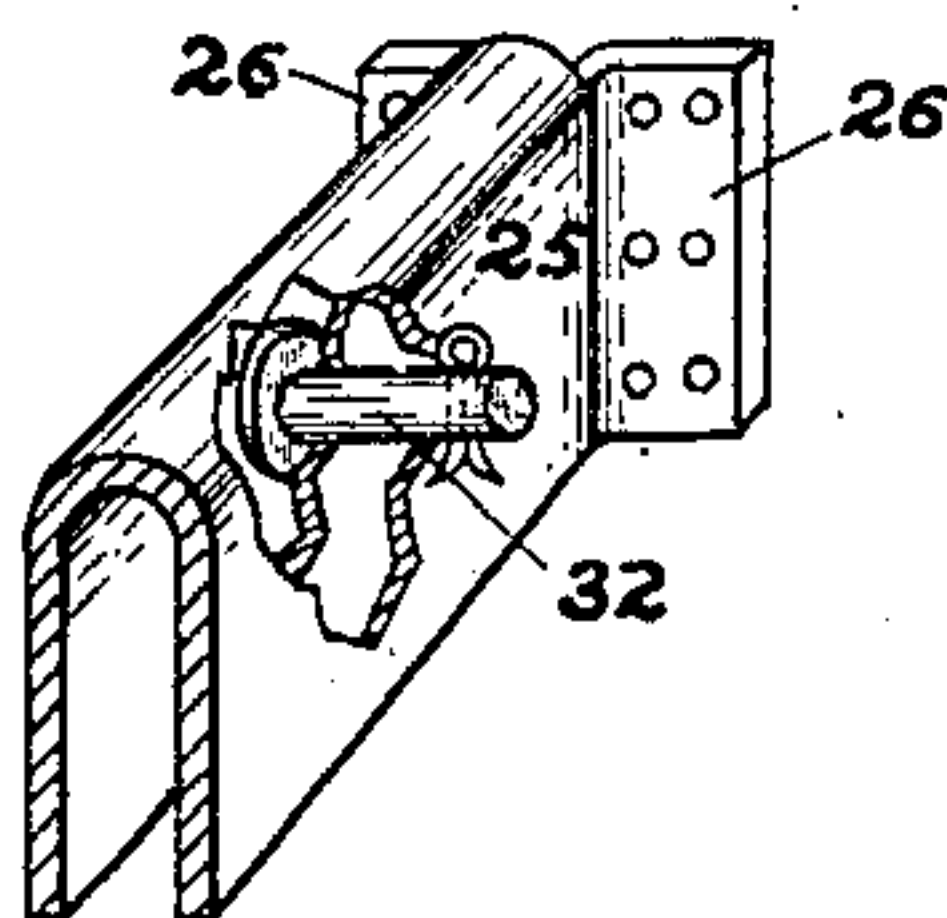


Fig 5.

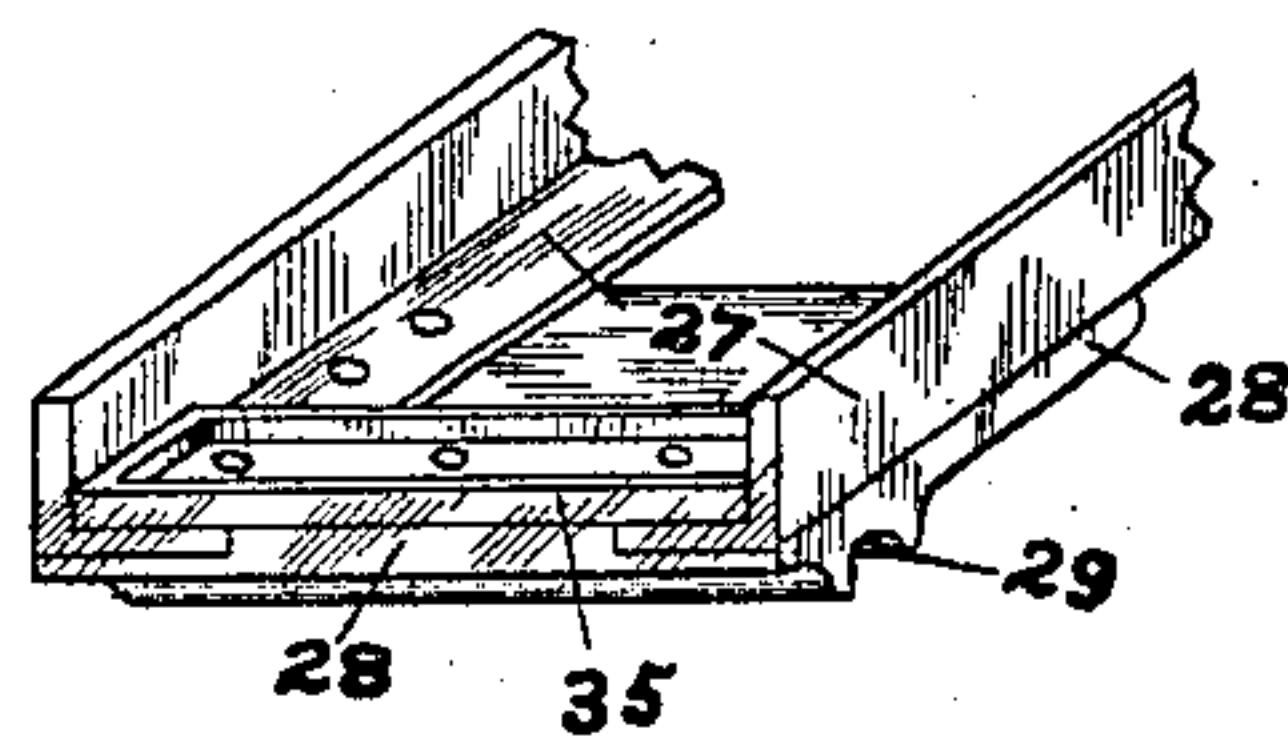
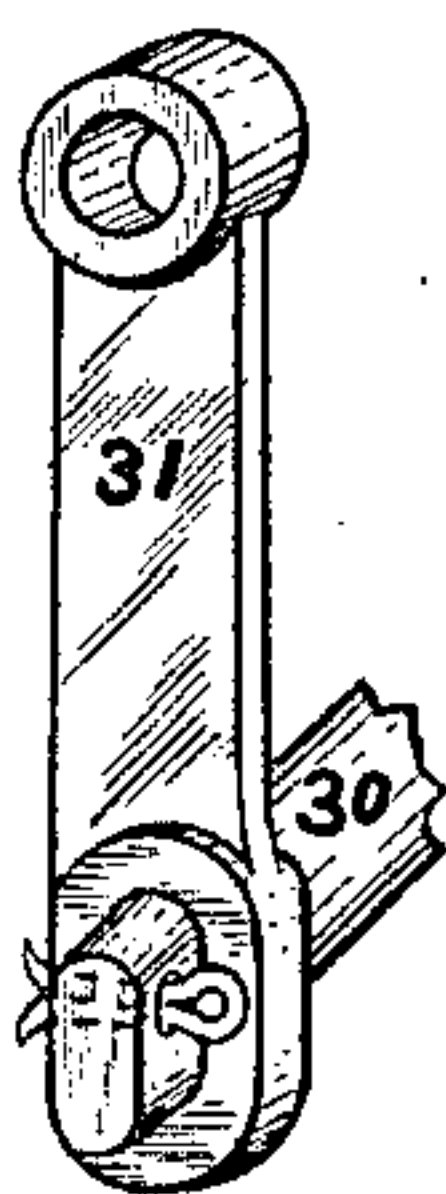


Fig 6.



Attest.

E. B. Lehman

Frank A. Spangler

Inventor.

Henry Tesseyman
By J. M. M. M.
his Atty.

UNITED STATES PATENT OFFICE.

HENRY TESSEYMAN, OF DAYTON, OHIO, ASSIGNOR TO THE BARNEY & SMITH CAR COMPANY, OF DAYTON, OHIO.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 754,027, dated March 8, 1904.

Application filed June 19, 1903. Serial No. 162,165. (No model.)

To all whom it may concern:

Be it known that I, HENRY TESSEYMAN, a citizen of the United States, and a resident of the city of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Car-Trucks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, as forming a part of this specification.

My invention relates to improvements in car-trucks, more particularly to the class known as "steel passenger-car trucks."

The invention has for its object to provide increased space between the side frames of the truck and the body of the car, whereby freer access for the purpose of examination and repairs is given and whereby the depth of the body-bolster can be increased for the purpose of adding strength thereto when required for extra heavy cars without raising the car-body.

A further object of the invention is to provide additional room for piping and other appliances.

To these ends the invention consists in the construction, combination, and arrangement of parts, as hereinafter fully described, pointed out in the claims, and which are fully illustrated in the accompanying drawings, of which—

Figure 1 is a perspective view of a car-truck embodying my said improvements. Fig. 2 is a broken vertical cross-section through line X X of Fig. 1 with the equalizer-springs, spring seats and brackets, and the journal-boxes removed. Fig. 3 is a view showing a partial side elevation and partial longitudinal cross-section through the center of the truck. Fig. 4 is a broken perspective view of the truck-transom detached from the truck. Fig. 5 is a broken perspective view of the spring-plank and bearing for the swing-motion axle, and Fig. 6 is a broken perspective view of the swing-motion hanger and swing-motion axle detached.

In construction both sides of the truck are alike. Therefore in the drawings and following description reference need only be made to one side thereof.

Similar reference-numerals indicate corresponding parts in all the figures of the drawings.

The side frames of the truck are each composed of a sheet of iron or steel 1, stiffened by angle-irons 2, 3, 4, and 5, riveted or bolted thereto around the edges on both sides thereof. These side frames are cut out at 6 to receive the journal-boxes 7 and at 8 to receive equalizer-springs 9 and at 10 to receive elliptic or bolster springs 11, as shown in Fig. 1. The openings or cut-outs 6 and 10 are provided with castings or forgings 12 13, riveted or bolted to the side frames for the purpose of strengthening the latter, and without some such strengthening means to compensate for the material so cut away the side frames would not be of sufficient strength to perform their functions satisfactorily. The cut-outs 8 may also be strengthened in a similar manner where it is deemed advisable. The castings 12 are usually termed "pedestals," and they form guides in which the journal-boxes move. The side frames are united at their ends by end sills 14 by means of brackets 15, and when thus united these several parts constitute what is commonly known as the "truck-frame."

16 represents equalizers, there being four to each truck, (one on each side of the two side frames,) and they are formed to the shape shown, their ends resting in grooves formed in the tops of the journal-boxes. Spring-seats 17 are mounted upon both equalizers at equal distances from the center thereof, and in or upon these seats the lower ends of the equalizer-springs rest, their upper ends being provided with caps 18, which bear against brackets 19 and 20, secured to the side frames on both sides thereof, the inside bracket 20 being arranged to receive the ends of and to carry cross-bars 21, which carry the brake mechanism.

At the center of the truck between the side frames there is located a truck-bolster 22, provided with the usual side bearings 23 and center plate 24. This bolster is connected with

and carries the car-body in the usual manner, and it may be of any preferred construction.

At each side of the truck-bolster and in near proximity thereto there is arranged a truck-transom 25, which in order to obtain maximum strength with minimum weight I prefer to make of a single piece of metal formed to resemble in cross-section an inverted letter U, with the ends of the side portions extending at right angles thereto and forming flanges 26, by which the said transoms are riveted or bolted to the side frames, as shown.

The truck-bolster, at each end thereof, is mounted on the elliptic or bolster springs 11, which in turn are mounted upon a spring-plank 27, preferably made of two angle-irons connected at each end by connecting-castings 28, which are provided with a bearing 29 for a swing-motion axle 30, the latter being suspended from the truck-transoms by means of a pair of swing-motion hangers 31, which oscillate on swing-motion pins 32, having their bearings in the side portions of the truck-transoms, as more clearly shown in Fig. 3, the upper edge of the swing-motion axle being rounded to register with the correspondingly-rounded surface of the bearing 29, whereby the requisite amount of horizontal movement of the spring-plank is permitted, the usual spring-seats 34 35 being interposed between the spring and the truck-bolster and spring-plank. To make more secure and strengthen the connections between the ends of the truck-transoms and the side frames, strengthening-plates 36 are secured to these parts, and filler-plates 37 are interposed between the side frames and the ends of the transoms, as shown.

It will be observed from the foregoing description that the truck-transoms carry the entire weight of the car-body and truck-bolster, the same being transmitted to the said transoms through the elliptic springs, the spring-plank, the spring-motion axle, the swing-motion hanger, and the swing-motion pins, and it will be understood by those familiar with the art of car-building that in trucks as at present constructed room must be provided for action of the equalizer-springs between the upper side of the equalizer-feet and the under side of the side frame of the truck, the latter being arranged above the former, while in my present invention the side frames, being located between the equalizers and arranged as described and shown, are reduced in depth above the journal-boxes, thus lowering the truck-frame to the extent of the depth of the equalizer-feet and the difference in depth of the frame at this point; also, that the side frames can be made of sufficient depths and the equalizers arranged to conform thereto to provide for all necessary variation in capacity of equalizer-springs and for the carrying of maximum load.

The foregoing is a general description of

the truck shown in the drawings, in which various details having no special reference to my invention are omitted. It is to be understood, however, that the truck-transoms instead of being formed of a single piece of metal may be made of several pieces riveted together and that other details of construction, as herein described, may be departed from without departing from the spirit of my invention.

Having thus fully described my invention, I claim and desire to secure by Letters Patent—

1. In a car-truck, the combination of side frames each consisting of a sheet of metal having separate stiffening members secured thereto around the edges on both sides thereof, openings formed in the side frames, pedestals mounted in said openings and secured to the side frames, journal-boxes operative within said pedestals, and an equalizer arranged on each side of the side frames and having their ends supported on the journal-boxes, substantially as shown and described.

2. In a car-truck, the combination of side frames each consisting of a sheet of metal having separate stiffening members secured thereto around the edges on both sides thereof, openings formed in the side frames, pedestals mounted in said openings and secured to the side frames, journal-boxes operative within said pedestals, an equalizer arranged on each side of each side frame and having their ends supported on the journal-boxes, and openings in the side frames provided with equalizer-springs carried by and exerting pressure against the equalizers and against the side frames, substantially as shown and described.

3. In a car-truck, the combination of side frames each consisting of a sheet of metal having separate stiffening members secured thereto around the edges on both sides thereof, openings formed in the side frames, pedestals mounted in said openings and secured to the side frames, journal-boxes operative within said pedestals, an equalizer arranged on each side of each side frame and having their ends supported on the journal-boxes, openings in the side frames provided with equalizer-springs carried by and exerting pressure against the equalizers and against the side frames, and openings in the side frames provided with bolster-springs extending there-through, substantially as shown and described.

4. In a car-truck, the combination of a plurality of truck-transoms each composed of two side portions with a space between and united to form a single structure, a truck-bolster arranged between said transoms, bolster-springs carrying said truck-bolster, a spring-plank carrying said bolster-springs, swing-motion axles carrying said spring-plank, swing-motion hangers carrying said swing-motion axles, and means for connecting the swing-motion hangers with said truck-transoms, substantially as shown and described.

5. In a car-truck, side frames each consisting of a sheet of metal having stiffening members around the edges thereof, in combination with a plurality of truck-transoms each comprising two side portions, swing-motion hangers carried between and in direct connection with the said side portions, and swing-motion axles carried by said swing-motion hangers, substantially as shown and described.

6. In a car-truck, the combination of a truck-frame consisting of side frames and end sills, and laterally-arranged truck-transoms, each comprising two side portions with a space between them, the said transoms being secured to and between the side frames below the upper sides thereof, swing-motion hangers carried between and in direct connection with the said side portions, and swing-motion axles carried by the said swing-motion hangers, substantially as shown and described.

7. In a car-truck, the combination of a truck-frame consisting of side frames and end sills, truck-transoms each composed of two side portions having a space between them, and swing-motion hangers, mounted within said spaces upon pins having bearings in and which

are carried by said side pieces, substantially as shown and described.

8. In a car-truck, the combination of a plurality of truck-transoms each comprising two side portions with a space between them, swing-motion hangers mounted therein and in direct connection therewith, and swing-motion axles carried by said swing-motion hangers, substantially as shown and described.

9. In a car-truck, side frames in combination with a plurality of truck-transoms each comprising two side portions with a space between them and provided at each end with flanged portions secured to the side frames, swing-motion hangers mounted within said spaces in direct connection with the said side portions, and swing-motion axles carried by said swing-motion hangers, substantially as shown and described.

In testimony whereof I have signed this specification, in the presence of two subscribing witnesses, this 15th day of June, 1903.

HENRY TESSEYMAN.

Witnesses:

JNO. I. UNDERWOOD,
H. B. MUST.