

No. 706,234.

Patented Aug. 5, 1902.

J. M. HANSEN.

TRUCK FRAME FOR RAILWAY CARS.

(Application filed Jan. 9, 1902.)

(No Model.)

2 Sheets—Sheet 1.

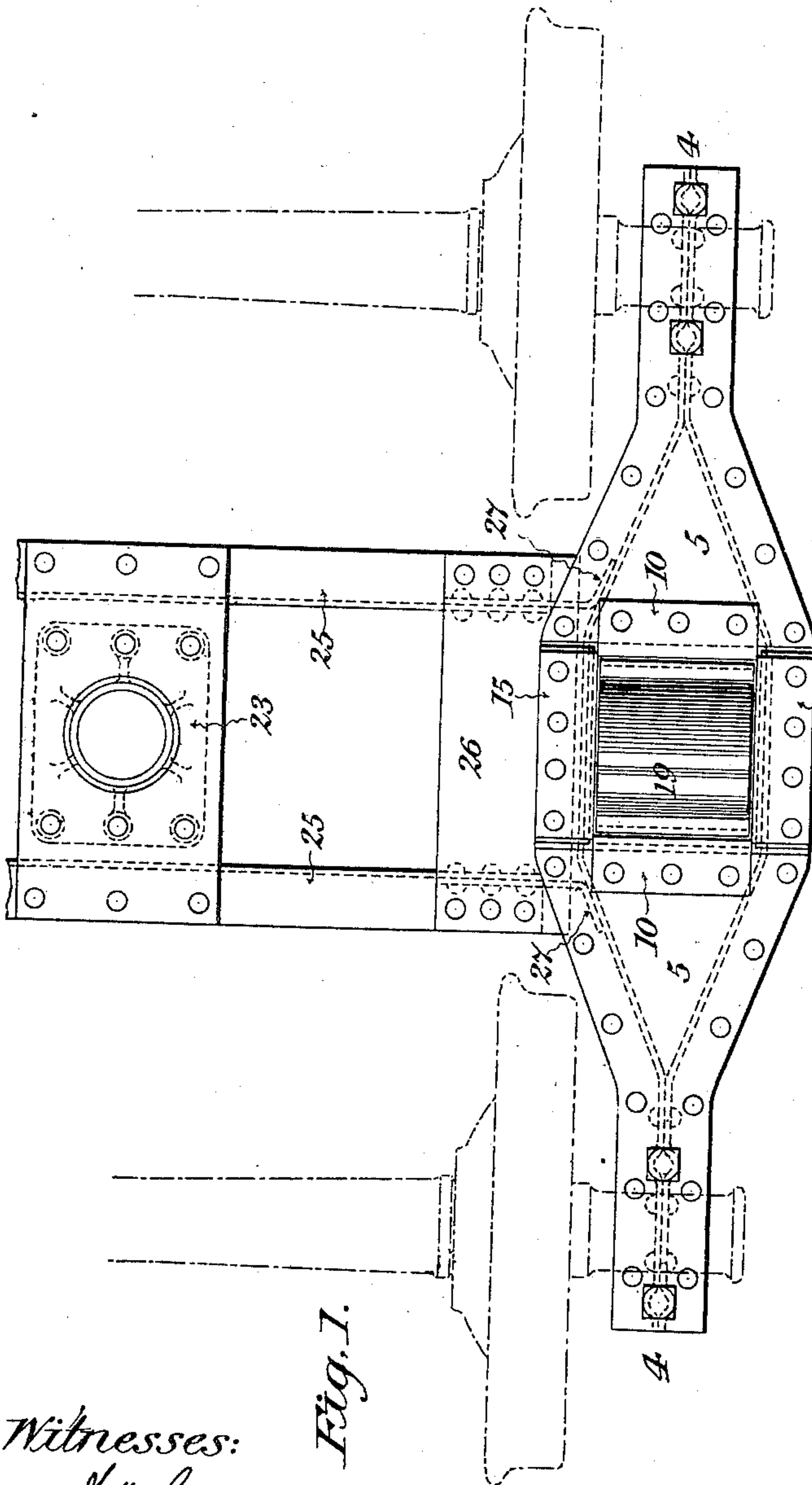


Fig. 1.

Witnesses:

A. M. Fouq.
E. A. Finckel.

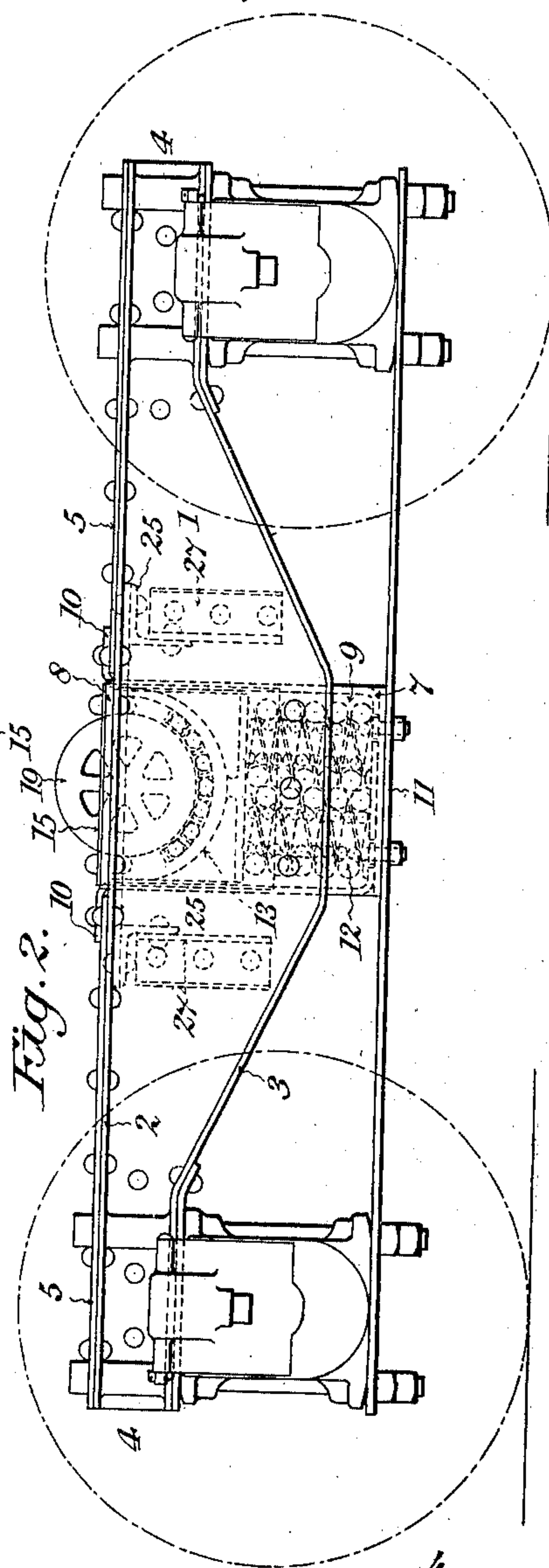


Fig. 2.

Inventor:

John M. Hansen.
by E. A. Finckel.
Att'y.

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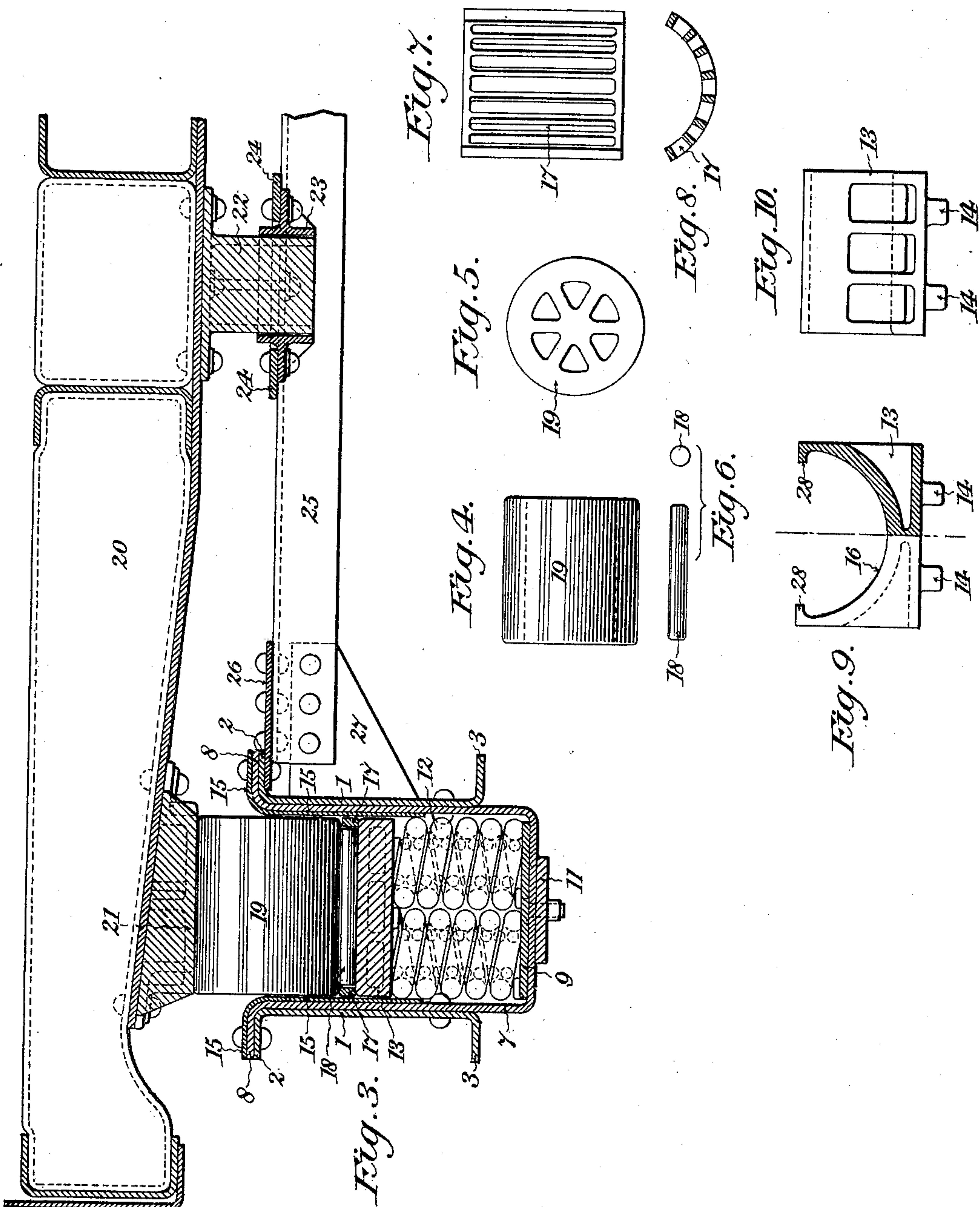
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2 Sheets—Sheet 2.



Witnesses:
A. M. Long.
E. A. Finckel.

Inventor:
John M. Hansen
by M. A. Finckel
Atty.

UNITED STATES PATENT OFFICE.

JOHN M. HANSEN, OF PITTSBURG, PENNSYLVANIA.

TRUCK-FRAME FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 706,234, dated August 5, 1902.

Application filed January 9, 1902. Serial No. 89,055. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. HANSEN, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Truck-Frames for Railway-Cars, (Case C,) of which the following is a full, clear, and exact description.

This invention, in common with that set forth in a concurrent case, relates to truck-frames for railway-cars; and, as in that case so here, the invention has for its object, first, to provide a side in which the springs may be arranged on the center line of the frame; but, unlike the specific instance shown in the said concurrent case, the side instead of being, strictly speaking, structural—that is to say, composed of a built-up upper arch-bar and a separate lower arch-bar—has these two arch-bars combined or solid and preferably pressed to shape; and the invention has for its object, second, to provide a truck-frame in which the truck-bolster is replaced by a central pivot and side bearings, which latter rest upon roller-bearings carried by the sides.

In carrying out the present invention I also use, as in the concurrent case, as a fundamental element in the construction of each of the sides a pair of what for want of a better name may be called “channel-beams,” comprising in one solid structure the upper and lower arch-bars, and these beams are brought together at their ends over the journals and spaced apart centrally in order to receive the springs and roller-bearings. The sides are united by transverse tie-bars, secured to the inner members of the arch-bars by suitable plates. These tie-bars take the place of a bolster, and to this end are provided with a socket, which receives a pivot-pin depending from the body-bolster, and the body-bolster has side bearings, which are supported upon the roller-bearings in the sides.

Having thus stated the principle of my invention, I will proceed now to describe the best mode in which I have contemplated applying that principle and then will particularly point out and distinctly claim the part, improvement, or combination which I claim as my invention.

In the accompanying drawings, illustrating

my invention, in the several figures of which like parts are similarly designated, Figure 1 is a top plan view of half of a car-truck frame embodying the features of the invention. Fig. 2 is a side elevation. Fig. 3 is a longitudinal section on a larger scale. Fig. 4 is an elevation, and Fig. 5 is an end view, of the main roller-bearing. Fig. 6 shows in elevation and end view the supporting-rollers for the main roller of the roller-bearing. Fig. 7 is a plan view, and Fig. 8 is a cross-section, showing the retainer for the supporting-rollers of Fig. 6. Fig. 9 is a half-section and side elevation, and Fig. 10 is an end elevation, of the roller-bearing base.

Since each side of the frame is constructed alike, the description of one side will suffice for both. A pair of pressed-steel shapes 1, which are counterparts, are provided to take the place of the upper and lower arch-bars, and each of these shapes is an integer by preference, with an upper horizontal flange 2 and a lower laterally-projecting flange 3, although these flanges may be angles attached to a flat web, if desired; but for manufacturing purposes it is preferred to make each member with its flange integral, as first described. These members are brought together at their ends 4 over the journals or axle-boxes, and between these ends and centrally of the side they are spread apart into a substantially hexagonal form, so that the sides are transversely wider at their center than they are at their ends and are vertically deeper at their center than at their ends for purposes of strength and to form an adequate receptacle for the spring-hangers, springs, and roller-bearings. The members 1 thus formed are united by top cover-plates 5, extending from the ends toward the center and riveted to the upper flanges 2.

A U-shaped stirrup 7 is arranged in the spaced-apart portion of the side, transversely thereof, with its flanged upper ends 8 riveted to the flanges of the sides, and within this stirrup and at right angles thereto is arranged another U-shaped stirrup 9, whose upper flanges 10 are riveted to the cover-plates 5, and these two stirrups constitute a spring-pocket. The lower ends of these stirrups are bolted or otherwise attached to a tie-bar 11, extending from pedestal to pedestal or box to box,

and thus the stirrups are secured at top and bottom rigidly and so restrained laterally by one another between the members or beams 1.

The springs 12 are arranged within the 5 spring hanger or pocket formed by these stirrups, and above these springs is placed a base 13, provided with lugs 14 to enter the springs and center them, and interposed between this base and the stirrup 7 are wear-plates or chafing-plates 15, which may be riveted to the 10 cover-plates along with the rivets that secure the stirrup 7 in place. This base has a semicircular cavity 16, within which is arranged a retainer 17 of grid-like construction and containing the cylindrical rollers 18, which constitute supports for the main roller-bearing 19. Of course the wear-plates 15 also serve to take the end thrust of the grid 17 and roller 19.

20 The bolster 20 has side bearings 21, which cooperate with the main rollers 19, arranged in the sides, to transmit the load of the car directly to said roller-bearings and sides, and in order to permit the truck to turn freely the 25 bolster has, as in the concurrent case, a pivot-pin 22, which is received in a bottomless socket-piece 23, secured by plate 24 to the angle-bars 25, which connect the opposite side frames of the truck.

30 The angle-bars 25 have their upper flanges riveted to plates 26, which in turn are riveted to the upper flanges of the sides, while their vertical flanges are riveted to gusset-plates 27, which in turn are riveted to the webs of 35 the inner members of the sides.

The base 13, as in the concurrent case, has overhanging lips 28 to prevent the upward escape of the retainer; but the retainer has no lateral flanges to interlock with the recesses in the base, as in said concurrent case, 40 but instead the retainer is made the full width of the base and its endwise movement restrained by the chafing-plates or wear-plates 15, which are extended down into the spring-pocket sufficiently for this purpose. 45

What I claim is—

1. A truck-frame, having a side composed of two complementary members brought together at their ends, and spaced apart centrally, and in which the upper and lower arch-bars are in one, substantially as described. 50

2. A truck-frame, having a side composed of complementary members brought together at their ends, and spaced apart centrally, and in which the upper and lower arch-bars are 55 formed of solid pressed-steel flanged beams.

3. A truck-frame, having a side composed of complementary pressed-steel laterally-flanged beams, of greatest vertical width in their center, brought together at their ends, 60 and spaced apart laterally between their ends, and united by cover-plates riveted to the upper flanges.

4. A truck-frame, having a side composed of a pair of solid pressed-steel combined upper and lower arch-bars, brought together at their ends, and spaced apart laterally at their center, a spring-pocket arranged in said spaced-apart center, and tie-bars secured by plates to the inner members of the adjacent 70 sides.

5. A truck-frame, having a side of substantially the construction described, provided with a central spring-pocket, a roller-bearing arranged in said pocket above the springs, 75 and chafing-plates interposed between the roller-bearing and the spring-pocket.

6. A truck-frame, having a side of substantially the construction described, provided with a central spring-pocket, a roller-bearing 80 arranged in said pocket above the springs, and chafing-plates interposed between the roller-bearing and the spring-pocket, said roller-bearing comprising a base, having a semicircular cavity, a roller-retainer arranged 85 in said cavity and containing supporting rollers, and a main roller arranged upon the supporting-rollers, the several parts of the bearing abutting against the chafing-plates, substantially as described. 90

7. A truck-frame, having a side composed of a pair of combined upper and lower arch-bars, brought together at their ends, and spaced apart centrally between such ends, and a spring-pocket within such spaced-apart 95 portion.

In testimony whereof I have hereunto set my hand this 7th day of January, A. D. 1902.

JOHN M. HANSEN.

Witnesses:

CHAS. F. CHUBB,
WM. BIERMAN.