

No. 823,482.

PATENTED JUNE 12, 1906.

J. PLAYER.
LOCOMOTIVE TRUCK.
APPLICATION FILED AUG. 29, 1905.

2 SHEETS—SHEET 1.

FIG. 1.

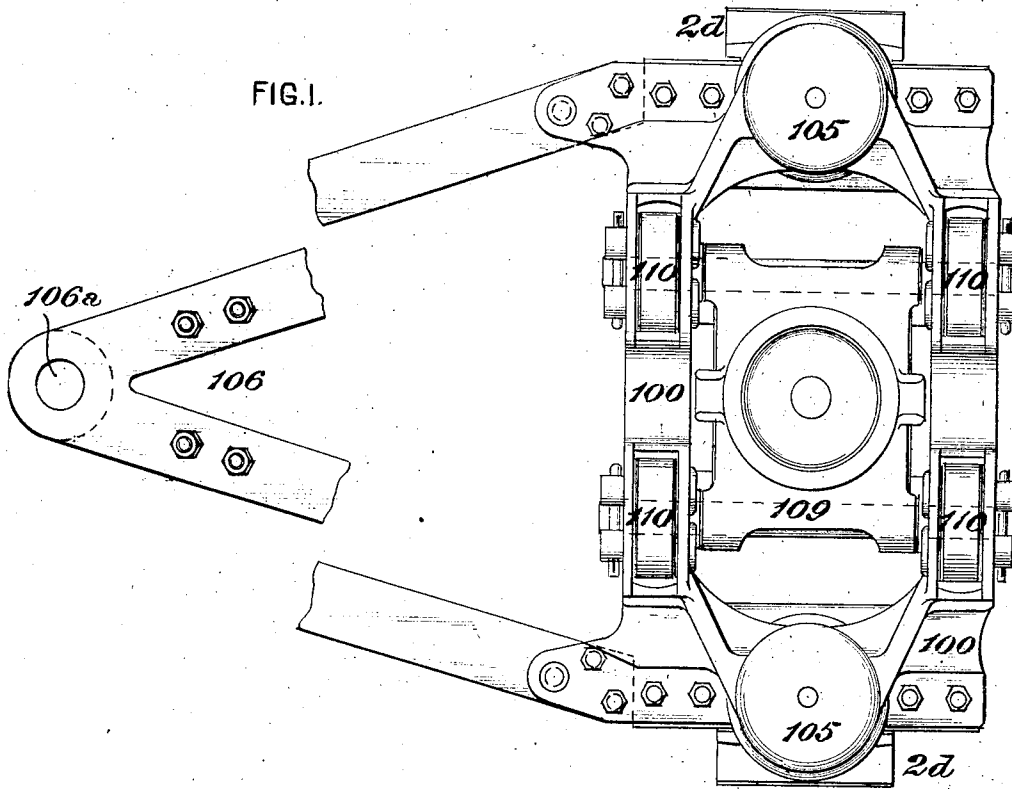
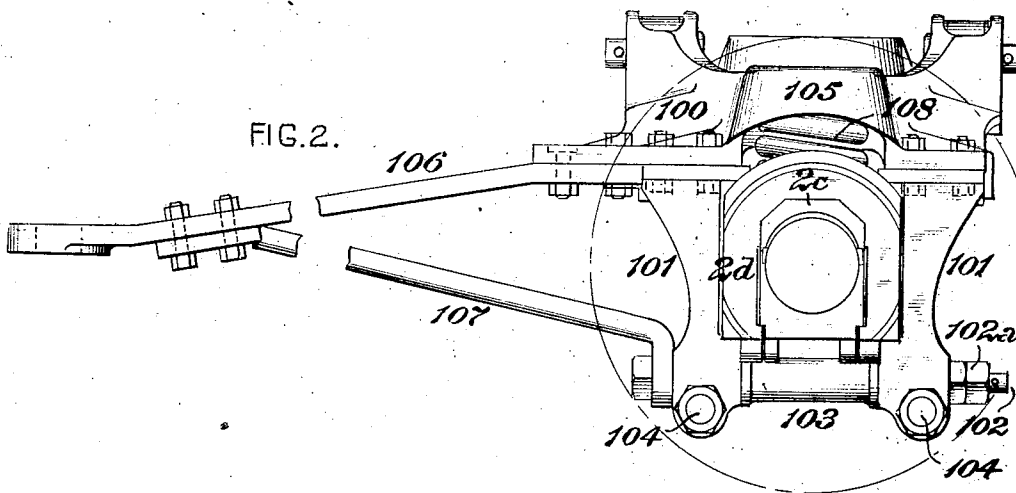


FIG. 2.



WITNESSES

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2 SHEETS—SHEET 2.

FIG. 3.

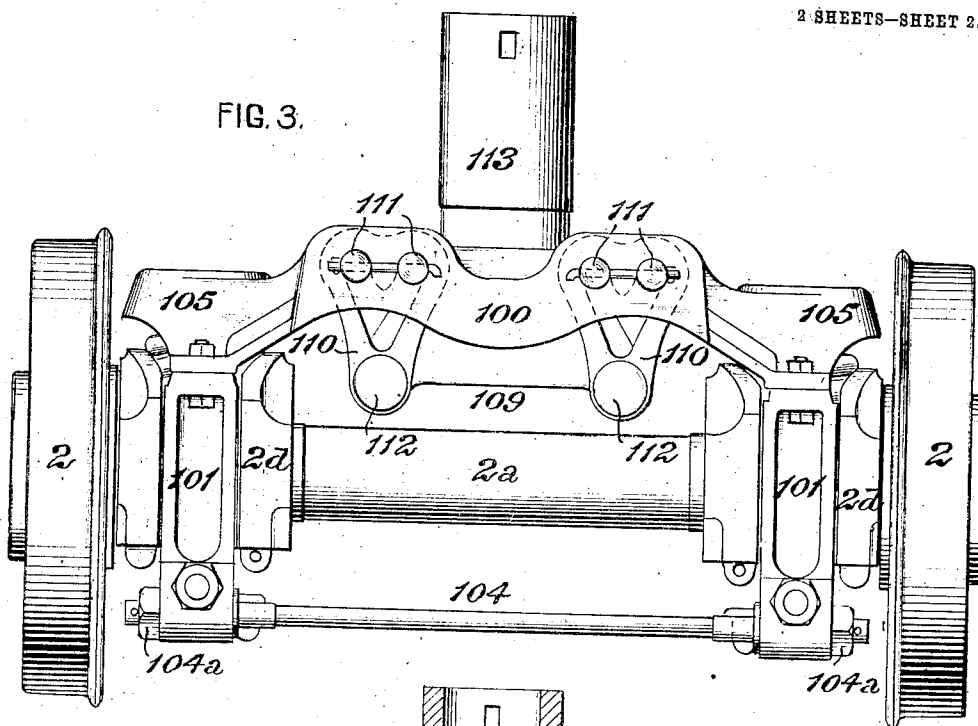
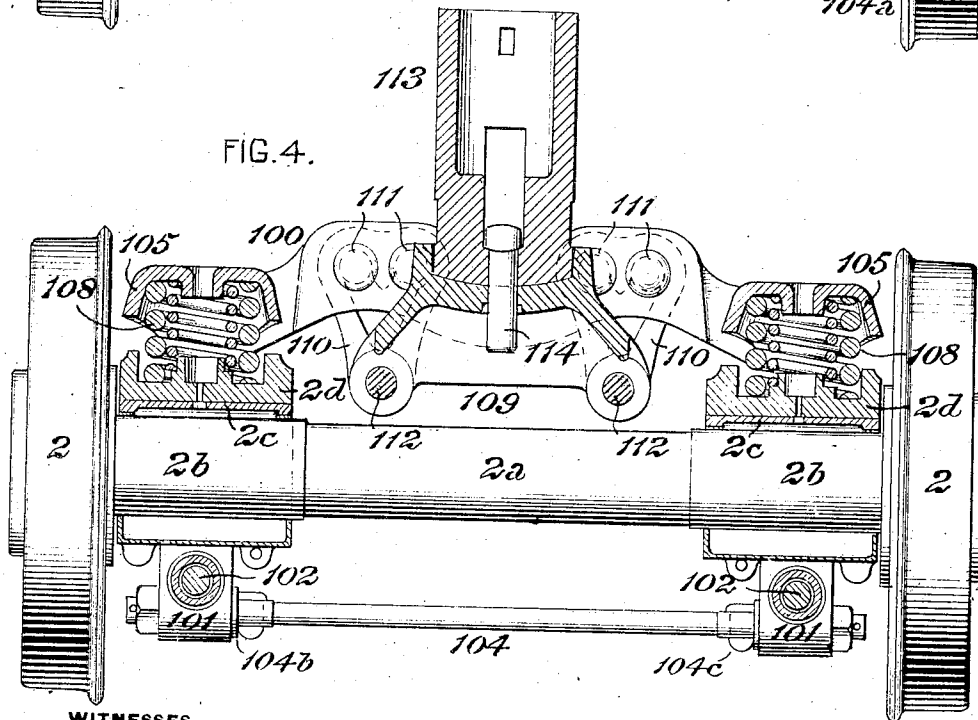


FIG. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN PLAYER, OF SCHENECTADY, NEW YORK, ASSIGNOR TO AMERICAN LOCOMOTIVE COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

LOCOMOTIVE-TRUCK.

No. 823,482.

Specification of Letters Patent.

Patented June 12, 1906.

Application filed August 29, 1905. Serial No. 276,191.

To all whom it may concern:

Be it known that I, JOHN PLAYER, of Schenectady, in the county of Schenectady and State of New York, have invented a certain new and useful Improvement in Locomotive-Trucks, of which improvement the following is a specification.

My invention relates to two-wheel leading or trailing trucks for locomotive-engines of the type known as "swing" or "lateral-motion" trucks; and its object is to provide a truck of such type in which the frame shall be of strong and simple construction and provide facilities for the application and location of the springs in such manner as to reduce the compass of the truck and prevent interference with the main frame of the engine, and also to enable the swing-beam and links to be compactly disposed and properly connected.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a plan or top view of a locomotive-truck embodying my invention; Fig. 2, a side view in elevation of the same; Fig. 3, a front view, and Fig. 4 a vertical longitudinal central section.

My invention is herein shown as applied in a two-wheeled leading truck adapted to support the front portions of the main frame of a locomotive-engine and the weight which is carried thereon.

The truck-frame 100 is formed in an integral casting, which is substantially rectangular in plan—that is to say, comprises parallel front and rear members extending transversely of the locomotive, which are connected at their ends by shorter side members extending parallel to the longitudinal central plane thereof and presenting plane lower faces for the attachment of pedestals. A pair of pedestal-jaws 101 is securely attached to each of the side members of the frame, and the jaws of each pair are connected adjacent to their lower ends by pedestal tie-bolts 102, which pass through thimbles or spacing-pieces 103, interposed between the jaws, and are provided with nuts 102^a, by which they are drawn to a proper bearing thereon. The front and the rear jaws on the opposite ends of the frame are respectively connected by tie-bolts 104, extending below and parallel with the front and rear members of the truck-

frame, said tie-bolts being shouldered or otherwise adapted to serve as spacing members between the inner sides of the opposite jaws and being fitted with nuts 104^a on their ends, which bear on the outer faces of said jaws. In the instance shown washers 104^b, fitted on the tie-bolts, abut against the inner sides of the jaws and are held in position by cotters 104^c, passing through the tie-bolts. A recessed spring-bearing 105 is formed in each of the side members of the truck-frame above and centrally between the pedestal-jaws of said side member. A V-shaped radius-bar 106 is bolted at its forward ends to the side members of the truck-frame and has an eye 106^a formed at its rear end for the reception of a pin, by which it is pivoted to the main frame. Brace-rods 107 are connected to the legs of the radius-bar near its eye, and their forward ends are turned downwardly and connected to the rear pedestal-jaws by the tie-bolts 104.

The truck-wheels 2 are secured in the usual manner on the outer ends of the axle 2^a, the journals 2^b of which rotate in bearings 2^c, fixed in axle-boxes 2^d, each of which is fitted to traverse vertically between the members of one of the pairs of pedestal-jaws 101. The truck-frame 100 is supported on the axle-boxes through the intermediation of helical springs 108, which seat in recesses on the tops of the axle-boxes, their upper ends being inclosed in and abutting on the spring-bearings 105 of the truck-frame. It will be seen that under this construction the proper amount of spring resistance may be readily applied and that the springs are almost entirely inclosed and protected. The space above the pedestals is, moreover, left entirely clear, and any interference with the main frame which might result from the presence of plate-springs and their hangers is entirely avoided.

The capacity of lateral motion of the truck-frame and its axle and wheels relatively to the main frame of the locomotive for the purpose of facilitating the passage of the locomotive to, through, and from curved portions of the track is provided for by means of a swing-beam 109, which is located within the open space between the members of the truck-frame and is suspended therefrom at each of its ends by pairs of swing-hangers 110, the upper ends of which pass through openings in

the front and rear members of the truck-frame and are each pivoted thereto by two upper swing-hanger pins 111, which fit in open-bottomed recesses in the swing-hangers.

5 The lower ends of the swing-hangers are coupled to the swing-beam by lower swing-hanger pins 112, the construction being of the general type known as a "three-point" suspension. The swing-beam 109 is provided with a cylindrical recess in its top and constitutes a lower center casting, and a cylindrical upper center casting 113, suitably connected to the main frame of the locomotive, is fitted with the capacity of relative rotary motion in the recess of the swing-beam. 15 A center pin 114 passes centrally through the upper and lower center castings.

While in the instance herein exemplified my invention is shown as applied in a truck 20 having its bearings located inside the wheels, it will be obvious to those skilled in the construction of railroad rolling-stock that it is equally and without variation of structural or operative principle applicable in trucks 25 having their bearings outside of the wheels.

The above-described construction provides a truck which is of ample strength and ready adaptability in standard locomotive designs and which by reason of the comparatively 30 small number of members and connections used is of simple and inexpensive construction and can be readily assembled and taken apart when required for purposes of renewal or repair. The compactness and protected 35 location of the springs, swing-beam, and hangers will also be recognized as being of substantial advantage in railroad service.

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

40 1. A frame for a lateral-motion truck, comprising, in an integral structure, front and rear members extending transversely to the longitudinal central plane of a locomotive and connected by shorter side members having plane lower faces for the attachment 45 of pedestals, and recessed spring-bearings formed on the side members.

2. In a lateral-motion truck, the combination of a substantially rectangular integral 50 frame, pairs of pedestal-jaws fixed to the side members of said frame, pedestal tie-bolts connecting the jaws of each pair, and tie-bolts

extending through and connecting the jaws of the opposite pairs.

3. In a lateral-motion truck, the combination of a substantially rectangular integral 55 frame, having recessed spring-bearings formed on its side members, pairs of pedestal-jaws fixed to the side members of said frame, means for bracing the pedestal-jaws both 60 transversely and longitudinally of the frame, and a radius-bar fixed to the frame adjacent to the pedestal-jaws.

4. In a lateral-motion truck, the combination of a substantially rectangular integral 65 frame having recessed spring-bearings on its side members, pairs of pedestal-jaws fixed to the side members on opposite sides of the spring-bearings, axle-boxes fitting between the pedestal-jaws, and springs interposed between and bearing on the axle-boxes and 70 spring-bearings.

5. In a lateral-motion truck, the combination of a substantially rectangular integral 75 frame, having recessed spring-bearings formed on its side members, pairs of pedestal-jaws fixed to the side members of said frame, axle-boxes fitted between said pedestal-jaws, an axle having wheels fixed upon it and journaled in said axle-boxes, springs through 80 which the weight on the frame is transmitted to the axle-boxes, a swing-beam located in the rectangular space between the frame members, and swing-hangers through which said swing-beam is suspended on the frame 85 members.

6. In a lateral-motion truck, the combination of a substantially rectangular integral 90 frame having recessed spring-bearings on its side members, pairs of pedestal-jaws fixed to the side members on opposite sides of the spring-bearings, axle-boxes fitting between the pedestal-jaws, springs interposed between and bearing on the axle-boxes and 95 spring-bearings, an axle having wheels fixed upon it and journaled in said axle-boxes, a swing-beam located in the rectangular space between the frame members, and swing-hangers through which said swing-beam is suspended on the frame members.

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Witnesses:

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GEORGE WAGSTAFF.