J. E. & W. P. TYNAN.

Car Truck.

No. 66,914. Patented July 16, 1867.

Fig. 1.

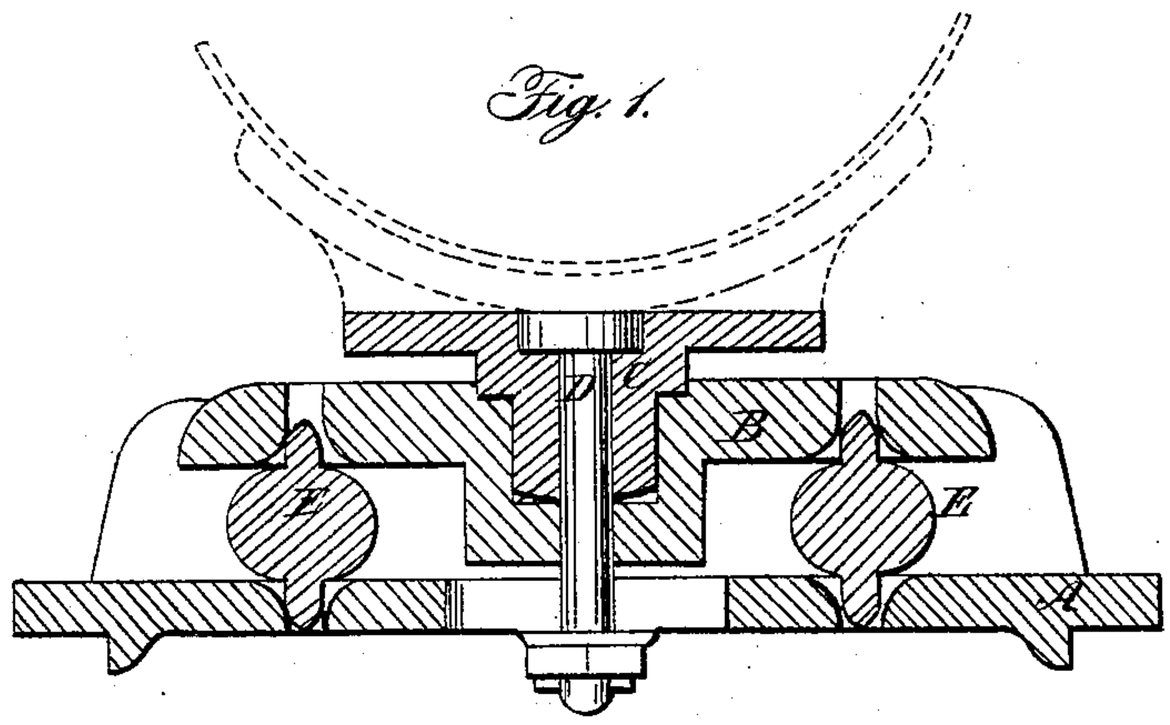


Fig. 2.

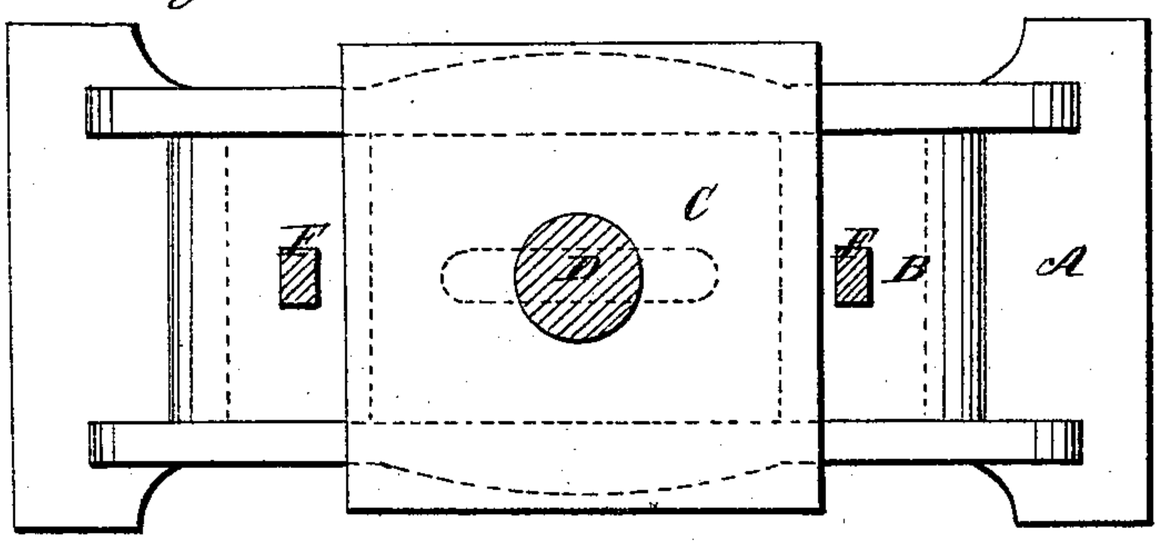


Fig. 3.

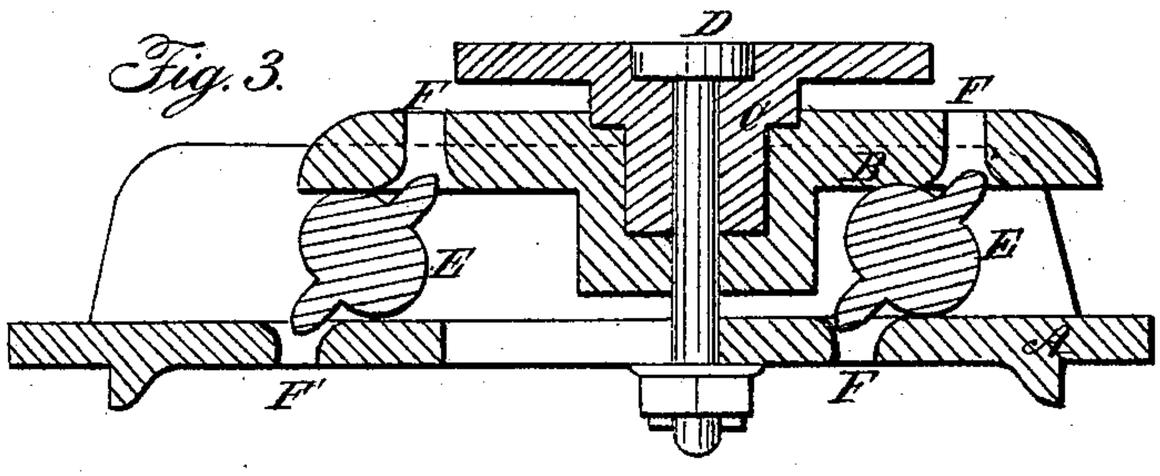
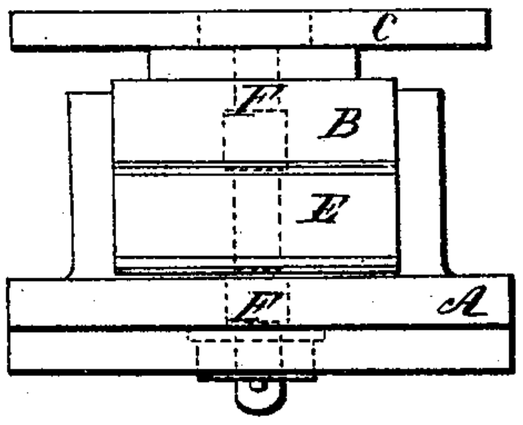


Fig. 4.



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Letters Patent No. 66,914, *dated July* 16, 1867.

IMPROVED LOCOMOTIVE TRUCK.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, JOSEPH E. TYNAN and WILLIAM P. TYNAN, both of Paterson, in the county of Passaic, and State of New Jersey, have invented a new and useful improvement in Trucks for Locomotives and Railroad Cars; and we hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures and letters marked thereon, in which—

Figure 1 is a vertical longitudinal section.

Figure 2 is a plan or horizontal view.

Figure 3 is a longitudinal section, the same as fig. 1, but showing the several parts in a different position.

Figure 4 is an end elevation.

Like letters refer to like parts in all the figures.

The nature of our invention consists in giving to trucks, or pilot-wheels of locomotives or cars, or other rolling-stock on railroads, in addition to the usual centre-bolt or pivot-motion, a lateral movement through a limited range, so as to accommodate the wheels of trucks to any difference of curvature in the rails which may exist between the wheels of the truck and the drivers in locomotives, or other accompanying wheels.

A is a strong beam or girder, which spans and is carried by the ordinary truck-framing. This beam is secured to the truck-frame by means of the lugs, seen upon either end in the drawing, and lies thereon athwart the track. It thus, together with the usual framework, unites the opposite wheels of the truck. On the upper surface of the beam A rise two strong flanches, which, besides strengthening the beam, serve as guides to the socket-plate B, which is fitted and rests between said flanches. The pivot-plate C, the lower portion of which is cylindrical and fitting into the socket-plate B, is free to revolve within the same. D is a centre or bolster-bolt, for the purpose of uniting A, B, and C, and also for the purpose of limiting the motion, by means of the slot, seen in A, figs. 1, 2, and 3, through which the bolt D passes. E E are two elliptical rollers, each having two wings or teeth radiating from its minor axis. These fit into the slots F F F′ F′, and prevent the rollers from leaving their proper position when rolled in either direction through the limited range allowed by the bolt D and slot, seen in figs. 1, 2, and 3. The socket-plate B is supported by, and to a certain extent (limited by the slot in A and bolt D) rolls upon the elliptical rollers E E. The pivot-plate C supports the forward end of the boiler or the body of the car, as the case may be, to which it may be attached by means of a saddle-piece or other suitable contrivance, as seen in dotted lines in fig. 1. The truck being thus attached, the pivot-plate C is free to rotate in the socket-plate B, and that being controlled by the flanches of the beam A, the truck-wheels will accommodate themselves to the varying curvature of the rails when moving thereon, if not otherwise controlled. But the engine being rigid, and influenced by the driving-wheels, a lateral motion of the truck with reference thereto becomes necessary. This we obtain by allowing the truck to move from the centre of the boiler or body of the car, as the case may be, in the manner shown as an extreme example in fig. 3, when the plate B will rise in some degree upon the major axis of the elliptical rollers E E, as shown. The weight of the locomotive or car resting, by means of the interposing plates C and B, on the elliptical rollers E E, the tendency of such weight, being on a rolling incline, is to force back the parts to a central position, as seen in fig. 1, when the drivers of the locomotive are supposed to be running on a perfectly straight track. Other accompanying wheels so connected are influenced in the same manner. The pivot, comprising the plates C and B, is free to travel from right to left or left to right upon the main truck-beam A, as the divergence from a straight line in the rails may occur and be determined by the driving-wheels and the boiler, or by other wheels and car.

We claim the elliptical winged rollers E E, the beam A, the socket-plate B, the pivot-plate C, and bolt D, when combined together as and for the purposes shown and specified.

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Witnesses:

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