J. INGERSOLL.

Car Truck.

No. 7.086. Patented Feb. 12, 1850.

Fig. 2.

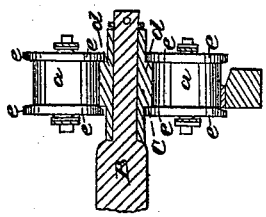
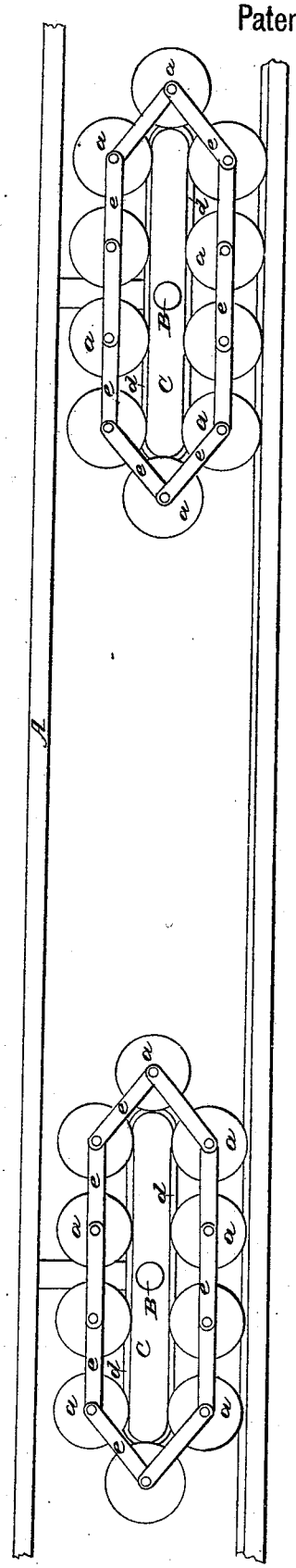


Fig. 1.



UNITED STATES PATENT OFFICE.

JAMES INGERSOLL, OF GRAFTON, OHIO.

RAILROAD-TRUCK.

Specification of Letters Patent No. 7,086, dated February 12, 1850.

To all whom it may concern:

Be it known that I, JAMES INGERSOLL, of Grafton, in the county of Loraine and State of Ohio, have invented a new and useful Improvement in the Running-Gear of Railroad-Cars and other Carriages, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which forms part of the specification, and in which—

Figure 1 represnts an elevation of the frame and trucks of a railroad car constructed in the manner invented by me, and Fig. 2, is a vertical transverse section through the center of a portion of one of the trucks.

In the drawing A represents the frame of a railroad car, supported on two of my trucks. Each of these consists of an axle B uniting two endless tracks C, around each of which an endless chain of friction rolls is arranged. The endless chain is composed in this instance of ten rolls, *a*, each having a broad cylindrical barrel terminated at each end by flanges *c* and running upon a broad rail *d* on the center of the endless track which is adapted to the breadth of the barrels between the flanges. The rolls are each furnished with two journals which project from their ends in the line of the axis, and which are connected on each side of the roll with the journals of the preceding, and succeeding rolls by links *e*, so as to constitute an endless chain surrounding the endless track. Each end of the axle of the truck is cylindrical and is fitted to a corresponding socket or box in the endless track, so that the latter can rock upon the axle in passing over inequalities in the railroad track. The truck may be connected with the car by any of the devices now used to connect four wheeled trucks with cars. The endless chain of rollers which thus surrounds the endless track, is prevented from slipping off the track, by the flanges on the ends of the rolls. It is obvious that this result may be accomplished with equal certainty by making the rolls plain cylinders, and placing a flange on each side of the track; or by making a single flange or rib on the periphery of the rollers, and a corresponding groove in the endless track for the rib to run in; or by making a continuous rib on the endless track, and grooving the barrels of the rollers.

The friction of a truck constructed as above described, is less than that of an ordinary wheel truck, as there is no weight upon the axles, and consequently, the expenditure of force required to overcome the friction at that point is saved. It possesses an advantage over all systems of friction rolls previously used in locomotion, because the rolls from the breadth of their barrels, and the corresponding breadth of the endless track, maintain themselves in an erect position without the assistance of axles to connect the rolls at one side of the truck, with those on the opposite side. Hence they can be arranged beneath the car in separate trucks, which possess all the advantages of wheel trucks in accommodating themselves to the inequalities and the curvature of the railroad track, while they are superior to them in working with less friction.

This description of running gear is applicable to carriages of all descriptions, and also to wheelbarrows, and hand trucks; it is also particularly adapted to the moving of large and heavy masses, such as houses or heavy blocks of stone, and to the raising of ships on dry docks.

Having thus described my improvements in railroad-cars and other carriages, what I claim therein as new and desire to secure by Letters Patent is—

The combination of an endless track on the frame of the carriage with an endless series of rollars running thereon and guided by flanges; the endless track being supported on the peripheries of the rollers which intervene in endless succession between it and the surface of the ground or rail and which are broad enough to keep themselves erect and steady without the use of axles or rods extending across the carriage.

JAMES INGERSOLL.

Witnesses:

P. H. WATSON,

E. S. RENWICK.