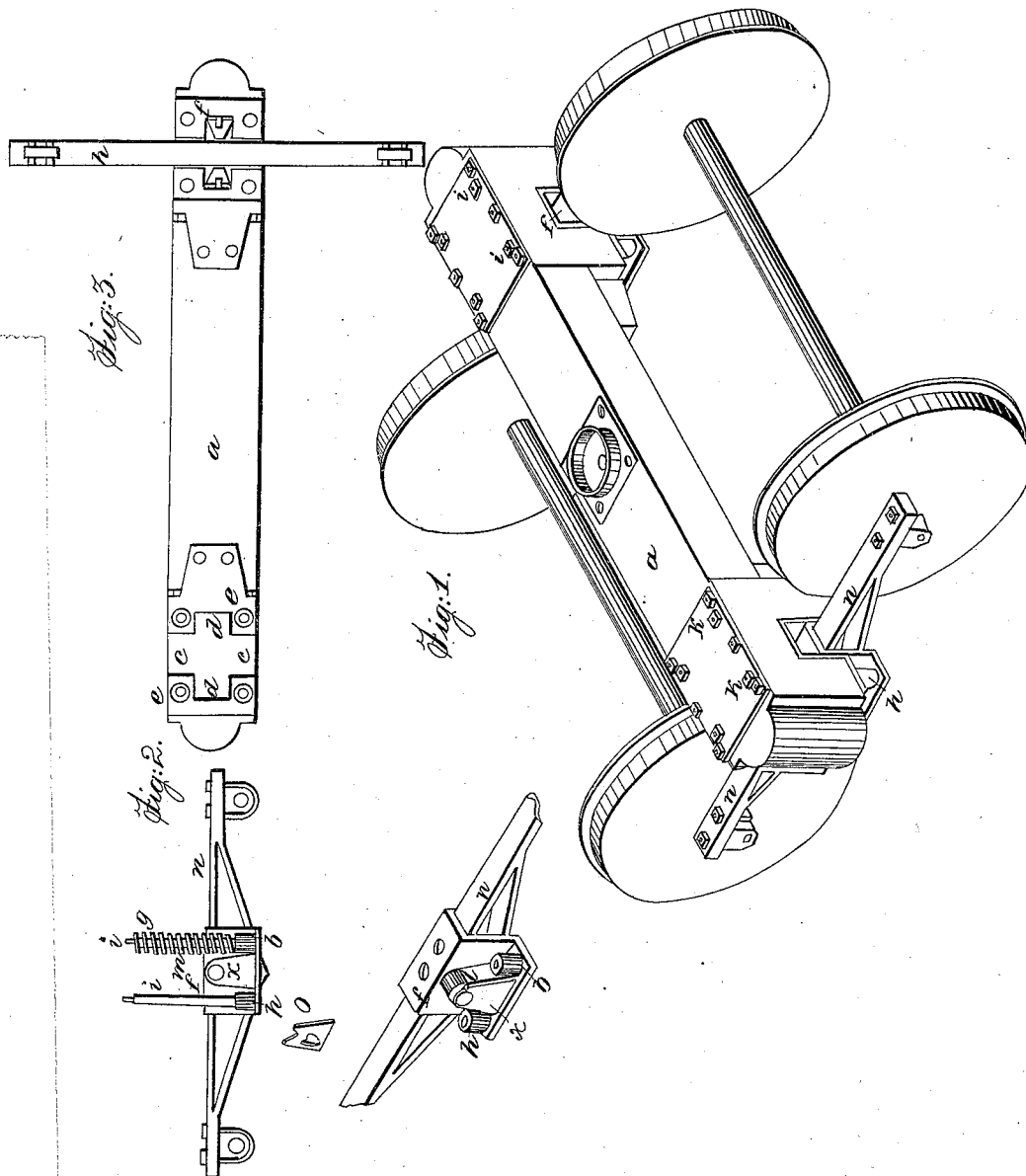


J. F. RODGERS.

Car Truck.

No. 4,746.

Patented Sept. 5, 1846.



# UNITED STATES PATENT OFFICE.

JOHN F. RODGERS, OF TROY, NEW YORK.

## RAILROAD-TRUCK.

Specification of Letters Patent No. 4,746, dated September 5, 1846.

*To all whom it may concern:*

Be it known that I, JOHN F. RODGERS, of Troy, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Railroad-Trucks, and that the following is a full, clear, and exact description of the principle or character thereof which distinguishes it from all other things before known, and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the truck, and Fig. 2, parts detached; Fig. 3, a plan of the underside of the beam.

The same letters indicate like parts in all the figures.

The trucks heretofore used on railroads have been either too stiff, not allowing any twisting movement to accommodate the wheels to the undulations of the road, or they have been deficient in stability and in strength. The form and construction of my spring balance beams and their connection with the center beam renders the truck flexible and its connections permanent so as to prevent its getting out of place as wheels run off the track. The construction is as follows: A bar (*a*) is made sufficiently strong for the purpose intended to which the car body is attached; near each end of this bar are plates of metal which surround it where the beam is enlarged on the under side; this band of metal has a recess (*c*) in it underneath that runs across the beam—this is for receiving the balance beam hereafter described; the recess (*c*) is crossed by another (*d*) at right angles to it, as more clearly shown in Fig. 3, and in each corner at the intersection of said recesses the plate is pierced with a hole (*e*) which extends through to the top of the beam; a sliding cap or spring plate (*f*) a side elevation of which is shown in Fig. 2 is made just to fit into the recesses (*c*) and (*d*) with flanges that project over the holes (*e*) on which flanges are formed tubes (*h*) that enter said holes; above the tubes and between them and the top plate spiral springs (*g*) are situated, and the plate is fastened to its place by bolts (*i*), (one of which is shown detached), which pass up through the tubes (*h*), where their heads catch upon an inner flanch in said tubes, and thence up through the springs

(*g*), and through the top plate where they are fastened by nuts (*k*) on the top. The lateral projections (*l*) on plate (*f*) are semi-circular at top or that part that projects up into the recess (*d*) above named, and into this curved part are received the trunnions or journals (*m*) of the balance beams (*n*); the sides of these projections are removable to admit the balance beam and they are afterwards replaced—one of them is shown detached at (*o*) Fig. 2; this being under the journal (*m*) completes its bearing and holds it steady. The balance beams are of a form best calculated for strength, the top bar of them being straight and the lower bar gradually extended down from each end at an angle to the center where there is an upright connection between them of which the journals above named form a part. On the end of the balance beams are boxes of any approved form in which the axles turn.

The operation of the truck it is obvious will be to bring all the wheels to a bearing while all lateral diagonal movement is avoided, the jaws between which the balance beam works being constructed so as to maintain said beams at right angles to the center beam (*a*), while either end has a free play up and down, the springs liberty of action, and the parts are firmly combined together.

Having thus fully described my improved truck, I wish it to be understood that I am aware that trucks have been formed with a single cross or center bar and in such a way as to allow any one of the wheels to rise and fall as in my construction, but they have all lacked the strength of connection to render them available, and their expense has been such as to prevent their use; therefore,

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

The combination of the balance beam with the center beam substantially in the manner set forth by means of the recesses in the center beam, spring plates having tubes thereon as described on which the springs rest and attached to the beam by bolts *i*, by which a compact and secure connection is formed while all the necessary flexibility is preserved.

JOHN F. RODGERS.

Witnesses:

JOHN M. THAYER,  
ISAAC TAGUE.