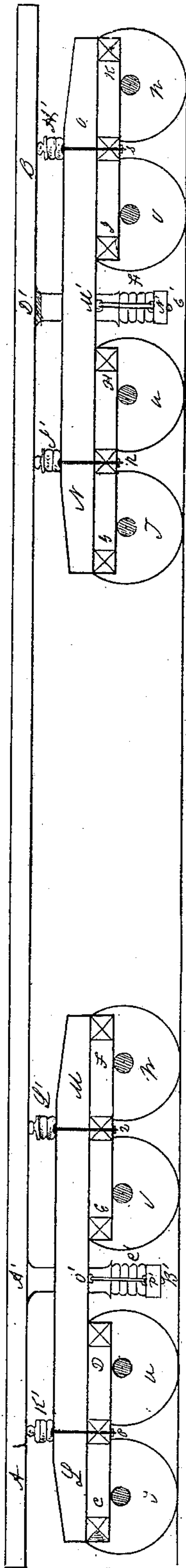


T. A. DAVIES.  
 RUNNING GEAR OF RAILROAD CARS.

No. 8,576.

Patented Dec. 9, 1851.

Section through the Centre of the Car. & Projection



*Witness: Henry O. Black*  
*John J. Rinsinger*

*Thos. A. Davies*

# UNITED STATES PATENT OFFICE.

THOMAS A. DAVIES, OF NEW YORK, N. Y.

## RUNNING-GEAR OF RAILROAD-CARS.

Specification of Letters Patent No. 8,576, dated December 9, 1851.

*To all whom it may concern:*

Be it known that I, THOMAS A. DAVIES, of the city, county, and State of New York, have invented a new and Improved Running-Gear for Railroad-Cars; and I hereby declare that the following is a full and exact description of the same.

The nature of my invention consists in applying four or more wheels on each side of railroad car trucks by means of a frame work inflexible vertically having a horizontal motion in such a way arranged that in case of depressions in the rails at their joinings or otherwise the wheel that passes over the depression shall be relieved of the weight of the load, thereby avoiding jarring and wear. These wheels are held in jaws of the ordinary make the box having play up and down but no springs between the frame work and the wheels. It is to be tested by experience whether it would be best to carry the wheels over depressions by not giving the box play in the jaw or whether it would be most desirable to allow the wheel to follow the rail in the depressions by means of this play without carrying the weight of the load with it.

By referring to the sectional drawing: Let A, B, be the platform of the car supported on the posts A' B' and D' E'. C D E F G H I K frame work supported on the axles of each two sets of wheels with a central transom bolted to the inflexible beams, L M and N, O, in such a way that each four wheels shall have a horizontal motion to run curves, around the spindles or bolts P, Q, R, S. There are transoms at E' and B' which are suspended from the center of the beams L M and N, O, on which springs are placed and on which springs rest the main part of the weight of the car and of the load.

By means of this suspension from the centers of the two trucks the car can vibrate in any direction. There are side support

springs at K', L', I' and H', which are placed between the frame work and the platform of the car merely to keep the car from tipping.

This completes the construction. If T, U, V, W, be the wheels and one say I should come to a depression in the rail the frame work on the axle being inflexible vertically it will be relieved of the weight of the load and it will be borne by those which are touching higher points be they more or less of the eight in each truck. As soon as this wheel passes over the depression and gains its bearing on the other side the second wheel does the same thing and so on for all on the side of the depression. The weak point of a rail is in like manner relieved by the weight being removed to those wheels having a firmer bearing and thus are little inequalities overcome without concussion which makes motion and of course wear. Thus on locomotives and cars with four wheels on a side where the weight is about equally distributed on the frame work, in this arrangement the weight is mainly applied to the center of the truck.

What I claim as new and original and desire to secure by Letters Patent, is—

Adapting to each side of railroad car trucks four or more wheels attached to a frame work inflexible vertically but with a horizontal motion in such a manner that in case of depressions in the rails at their joinings or otherwise they (the wheels) will alternately by couplets triplets or the like receive the weight of the load above and relieve the wheel passing over the depression from the weight of the load and frame work so that no concussion blow is struck with that weight or jar created, substantially as above described.

THOS. A. DAVIES.

Witnesses:

HENRY D. CLARK,  
JACOB D. SEABURY.