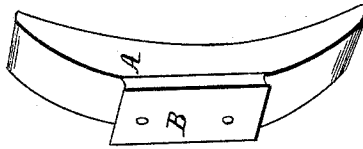


T. C. BALL.  
Car-Brake Shoe.

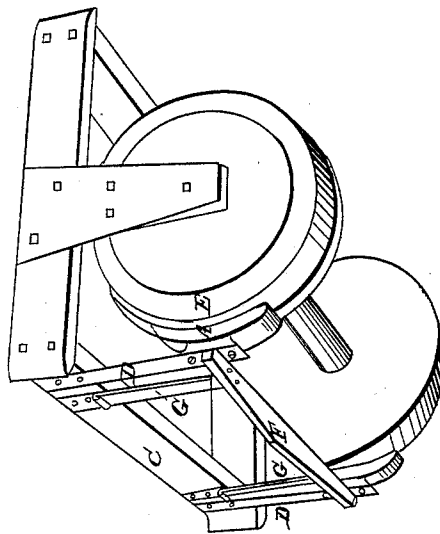
No. 24,918.

Patented Aug. 2, 1859.

*Fig. 2*



*Fig. 1*



*Witnesses*

*Daniel Watson*

*Edward Farrar*

*Inventor*

*Thos C Ball*

# UNITED STATES PATENT OFFICE.

THOMAS C. BALL, OF KEENE, NEW HAMPSHIRE.

## IMPROVEMENT IN THE MODE OF HANGING BRAKE-RUBBERS.

Specification forming part of Letters Patent No. 24,918, dated August 2, 1859.

*To all whom it may concern:*

Be it known that I, THOMAS C. BALL, of Keene, in the county of Cheshire and State of New Hampshire, have invented a new and Improved Car-Brake; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon.

The nature of my invention consists in so suspending each brake-head upon a spring that the tread of the brake-head shall be perfectly adjustable to the periphery of the wheel as its relative position to the car-truck shall vary with the weight and motion of the car, the flexibility of the spring allowing all the movements of the brake-head without a hinge-joint; in so attaching the brake-head to the spring-suspender by bolts or their equivalents as to be readily exchanged when worn; and in so suspending the brake-beam that its action shall bring the brake-heads to the wheel without being attached to them by bolts or otherwise, thus obviating the twisting strain upon the beam and the strain upon such bolts or other means of attachment arising from the varying relative position of the wheels to the car-truck, thus saving much of the expense of brakes in former use.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my brake-head in the form shown at A, Figs. 1 and 2 in the accompany-

ing drawings, of the proper size and curve to fit the wheel, the material being iron or other proper material, the face B, Fig. 2, being of proper length and breadth to allow the head to be firmly bolted to the spring-suspender D, Fig. 1. The spring D is of steel of width and thickness to be sufficiently strong and of proper flexibility and of such length as to be bolted upon the truck-frame C, Fig. 1, in a perpendicular position and bring the curved face of the brake-head nearly parallel with the periphery of the wheel E. The brake-beam F, Fig. 1, of the ordinary form is suspended to the truck-frame by the hangers G G, parallel with the axle of the wheels, each end resting upon the spring at the center of the brake-head, as shown in the drawings, the whole actuated by the ordinary means. The brake-head requiring much less attachments and bearings of attachments can be made much lighter than the ordinary iron brake-head.

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

The combination of the brake-head and spring, as above described, also the arrangement of the brake-beam E, Fig. 1, so as to allow its independent action upon brake-head and spring A and D, Fig. 1, as described.

THOS. C. BALL.

Witnesses:

DANIEL WATSON,  
EDWARD FARRAR.