

G. W. HOPPER.  
Railway Car-Brakes.

No. 151,593.

Patented June 2, 1874.

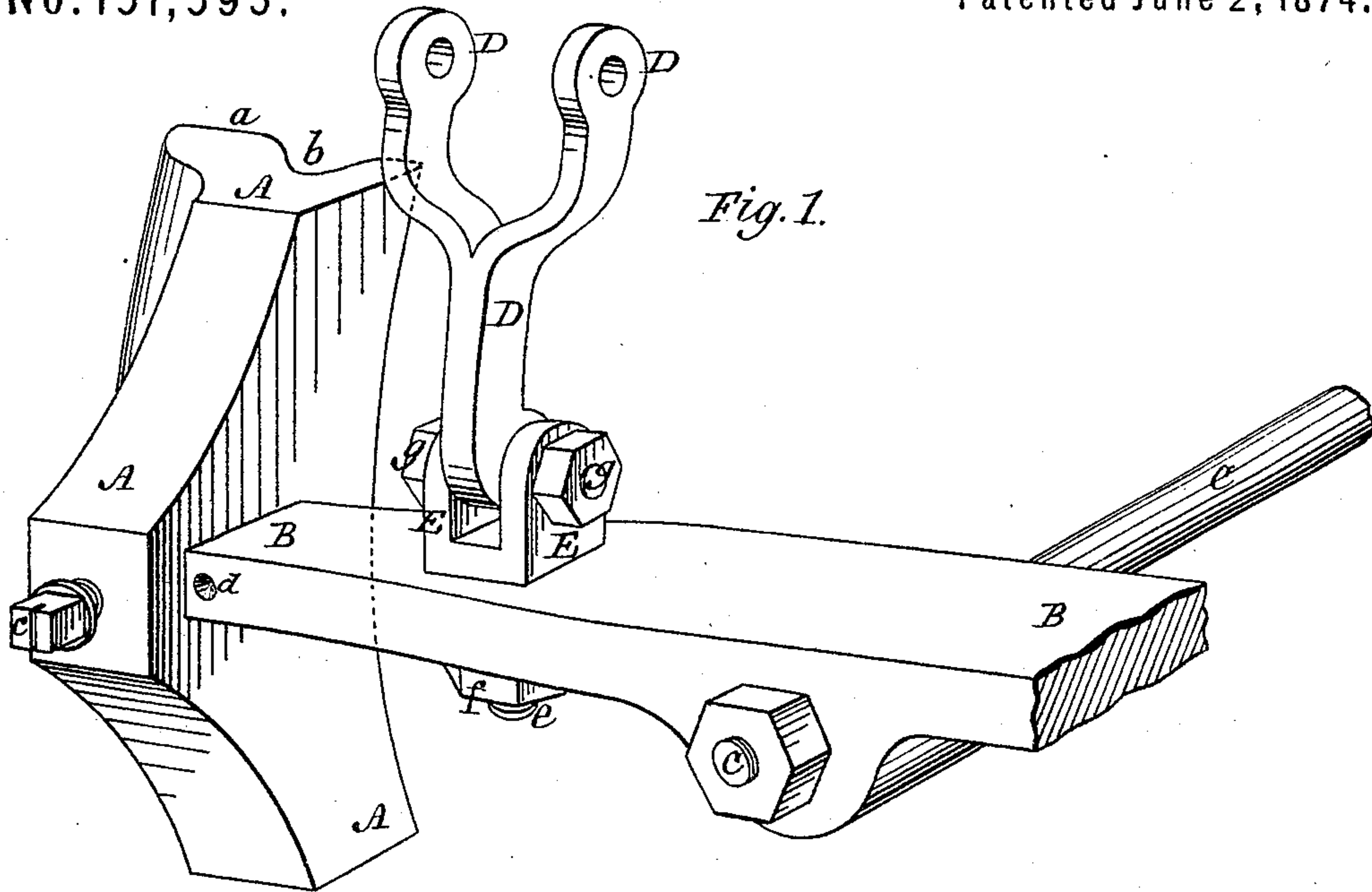
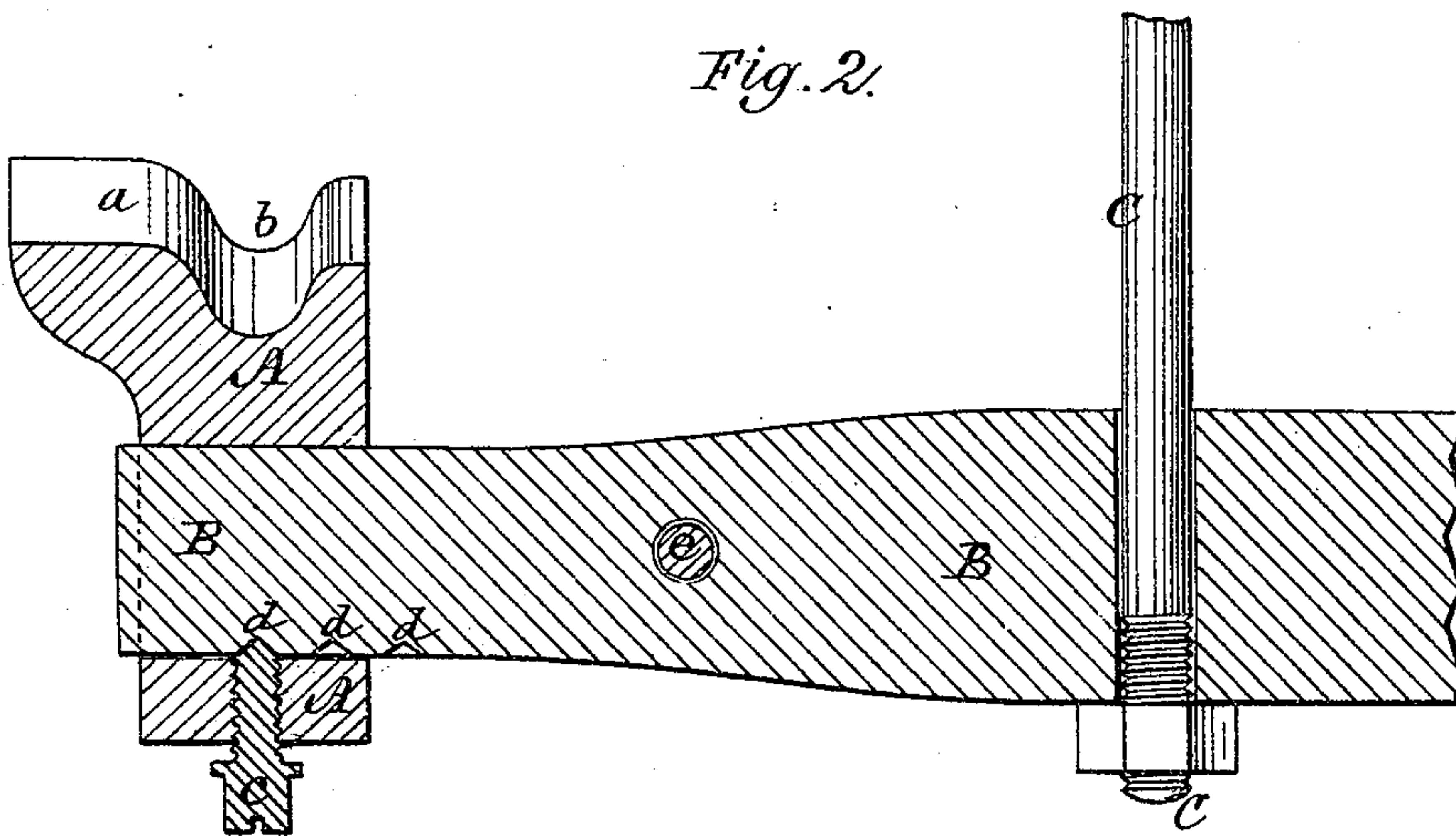


Fig. 2.



Witnesses.  
Alonzo Hughes }  
Edmund Masson }

Inventor:  
George W. Hopper.  
By Atty. A. B. Stoughton.

# UNITED STATES PATENT OFFICE.

GEORGE W. HOPPER, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-FOURTH HIS RIGHT TO WILLIAM H. HARRIS, OF SAME PLACE.

## IMPROVEMENT IN RAILWAY-CAR BRAKES.

Specification forming part of Letters Patent No. **151,593**, dated June 2, 1874; application filed May 8, 1874.

*To all whom it may concern:*

Be it known that I, GEORGE W. HOPPER, of Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Car-Brake Attachments; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents, in perspective, so much of a car-brake as will illustrate my invention. Fig. 2 represents a horizontal section through the same.

My invention relates, first, to the manner of uniting the brake block or shoe to the brake-bar; and, secondly, to the manner of hanging the brake-bar to the truck-frame.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

The brake block or shoe is shown at A. It is of metal, in a single piece, and, by preference, of cast-iron. The face of the brake-block may be shaped or formed as at *a b*, so as to fit and work against both the tread and flange of the car-wheel. Through this brake-block is made a rectangular opening, which takes in the end of the brake-bar B; and, when the block or shoe is properly adjusted upon the bar B, it is securely fastened there by a set-screw, *c*, the point of which takes into a countersink, *d*, of which there are several in the bar. The brake-bar B is of metal, and through

it passes the brake-rod C, by which the brake is applied in the usual well-known ways. The hanger D, by which the brake-bar is suspended from the truck-frame, is both swiveled and hinged, as follows: The shank *e* of the holder E, upon which the nut *f* is run, turns freely in the brake-bar B, and the hanger D is pivoted to the holder E, as at *g*, so that the hanger can hinge on the joint *g*, and swivel on the shank *e*. By giving this hanger a double movement, or a swivel-joint movement, the brake-blocks are freely moved up to the wheels, and as readily fall away when released; but a greater advantage is, that if the brake-rod C should happen to get bent, as it is very liable to do from its exposed position, in which case but one of the blocks would come up to the wheel, then this swivel-joint will allow the brake-bar B to skew a little, and so let both blocks come against their respective wheels.

What I claim is—

1. In combination with the shoe A, having opening into which the brake-bar enters, and brake-bar B, the set-screw and countersinks, by which the shoe is connected and adjusted, as set forth.

2. In combination with the shoe A, brake-bar B, and brake-rod C, the swivel-joint hanger E D, as and for the purpose set forth.

GEORGE W. HOPPER.

Witnesses:

R. HEWITT,  
JAMES F. HEYWARD.