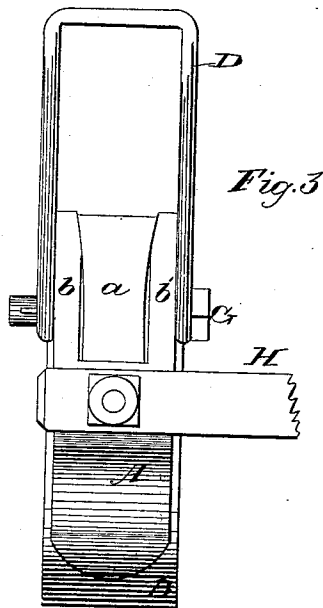
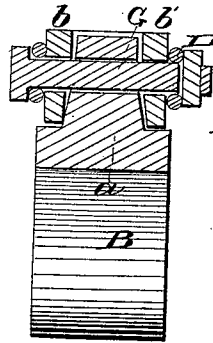
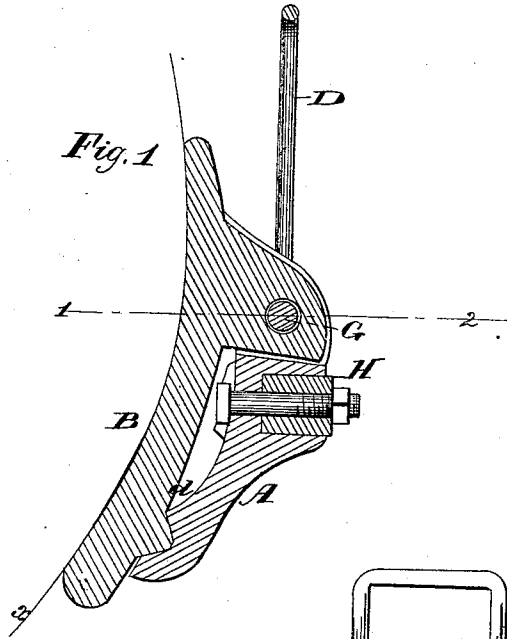


J. BING.  
Car-Brake Shoe.

No. 40,156.

Patented Oct. 6, 1863.



*Witnesses*

*Charles E. Foster*  
*Charles Rowson*

*Inventor*

*Henry Rowson*  
*Atty for J. Bing*

# UNITED STATES PATENT OFFICE.

JAMES BING, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVED SHOES FOR CAR-BRAKES.

Specification forming part of Letters Patent No. 40,156, dated October 6, 1863.

*To all whom it may concern:*

Be it known that I, JAMES BING, of Philadelphia, Pennsylvania, have invented an Improvement in Shoes for Car-Brakes; 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, and to the letters of reference marked thereon.

My invention relates to the construction of shoes or rubbers for car-wheels; and it consists, first, in constructing the shoe of two parts in the peculiar manner described hereinafter, so that the part in contact with the wheel can accommodate itself to the same; secondly, in the peculiar combination described hereinafter of the two parts of the shoe, the clevis by which the shoe is suspended to the truck and the bolt which secures the clevis to the shoe, and the two parts of the shoe to each other.

In order to enable others skilled in this class of mechanism to make and apply my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a vertical section of my improved shoe for railway car-brakes; Fig. 2, a sectional plan on the line 1 2, Fig. 1, and Fig. 3; a front view of the shoe.

Similar letters refer to similar parts throughout the several views.

A is the shoe, and B the sole, the latter being formed to fit the periphery of the car-wheel, (part of which is shown by the line *x*), and having a lug, *a*, which fits between the lugs *b* and *b'* on the shoe.

D is a clevis, the upper end of which is suspended to the truck of the railway-car, the lower end being arranged to embrace the lugs *b* and *b'* of the shoe, a bolt, G, passing through the lower end of the clevis, through the lugs *b* and *b'* of the shoe, and through the lug *a* of the sole B.

It will be observed on reference to Fig. 2 that the lug *a* is made tapering, and that the bolt G fits loosely on the said lug as well as in the lugs *b* and *b'*, so that the sole is self-adjustable laterally, for a purpose described hereinafter. A projection, *d*, on the sole B fits into a socket in the shoe in such a manner that the sole can vibrate laterally in the said socket, while the projection serves to main-

tain the shoe and sole in their proper relative positions.

H is the usual brake-beam, one end of which fits into a recess in and is secured to the shoe A, the other end of the beam being secured to a similar shoe on the opposite side of the car-truck.

The peripheries of car-wheels are always beveled or inclined so that it becomes necessary to make the soles of the ordinary shoes or rubbers of a corresponding bevel, one shoe at one end of the beam being beveled in one direction, and the other shoe, at the opposite end of the beam, being beveled in a contrary direction. Even when the usual shoes are properly fitted to the beveled peripheries of the wheels, the lateral movement of the axles as the wheels traverse curves of the track is such that the ordinary shoes cannot fit accurately at all times. Another evil attending the use of ordinary shoes or rubbers is that as the lateral movement of the axles takes place an undue strain is imparted to the brake-beam. These difficulties are avoided by my invention, inasmuch as the sole B is permitted to have a lateral rocking motion on the shoe, and can at once accommodate itself to the bevel of the wheel or to any variation caused in that bevel by the lateral movement of the axle.

Another improvement in my invention is the peculiarly simple arrangement of the clevis which supports the shoe, the bolt G serving the purpose of connecting the clevis to the shoe and the latter to the sole.

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

1. The shoe A and sole B, both being constructed and adapted to each other, substantially as described, so that the sole can have a lateral rocking movement on the shoe, for the purpose specified.

2. The combination of shoe A, sole B, clevis D, and bolt G, the whole being constructed and arranged substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES BING.

Witnesses:

HENRY HOWSON,  
JOHN WHITE.