

J. WOOD.
Car-Brake Shoe.

No. 45,106.

Patented Nov. 15, 1864.

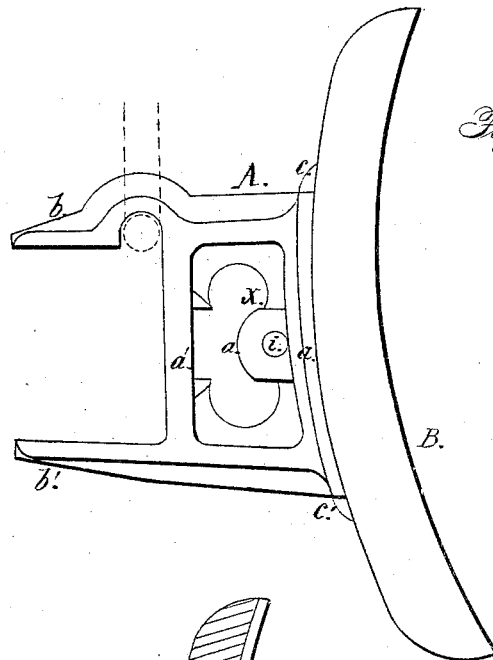


Fig. 1.

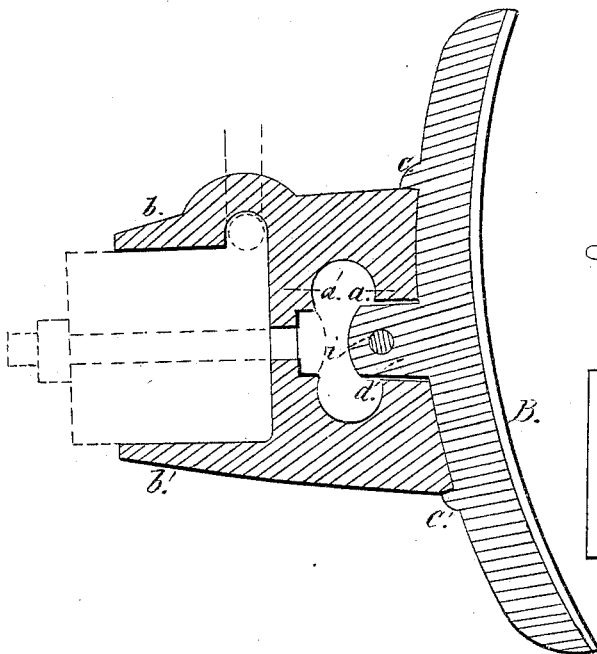
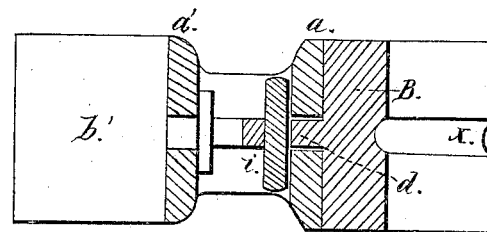


Fig. 2.



Witnesses:

W. Albert Steel.
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Inventor:

Henry Howsen.
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UNITED STATES PATENT OFFICE.

JOSEPH WOOD, OF RED BANK, NEW JERSEY.

IMPROVED SHOE FOR CAR-BRAKES.

Specification forming part of Letters Patent No. 45,106, dated November 15, 1864.

To all whom it may concern:

Be it known that I, JOSEPH WOOD, of Red Bank, Monmouth county, New Jersey, have invented an Improved Shoe 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 consists of a brake-shoe, constructed substantially as described hereinafter, with the view of simplifying the parts, readily detaching the sole from and as readily attaching it to the shoe, and maintaining the sole in a comparatively cool state.

In order to enable others 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 side view of my improved shoe for car-brakes; Fig. 2, a vertical section, and Fig. 3 a transverse section on the line 1 2, Fig. 1.

Similar letters refer to similar parts throughout the several views.

A is the cast-iron shoe, between the portions *a* and *a'* of which is an opening, X, two projections, *b* and *b'*, forming part of the shoe, and embracing the brake-beam, as shown by dotted lines in Fig. 2.

B is the sole-piece, the face of which is curved to suit the periphery of the car-wheel, the shoe fitting to the sole-piece between two lugs, *c* and *c'*, cast on the same. At the back of the sole-piece is a lug, *d*, which projects through an opening in the portion *a* of the shoe into the recess X, and transversely through a hole in the lug passes a tapering pin, *i*, which, bearing against the inner side of the portion *a'* of the shoe, serves to secure the latter to the sole, while the two are retained in their proper relative position vertically by the lugs *c* and *c'*.

Shoes with detachable sole-pieces have been heretofore used to advantage—the only objections to their general adoption being the expensive castings required (especially when one part is dovetailed to the other) and the amount of time and labor demanded in fitting the two parts together and detaching them from each other. In the use of ordinary brake-shoes, too, the surfaces of the soles and the peripheries of the car-wheels frequently become so hot through excessive friction as

to ignite inflammable substances which may be brought in contact with them. This sometimes occurs where coal-oil escapes from barrels placed on trucks and flows onto the wheels or brake-shoes where it is ignited, and causes destructive conflagrations.

It will be apparent that a shoe of the character above described is most simple in construction, and that only the ordinary cleansing of the castings is required prior to fitting them together. It will also be seen that the manner of securing the two parts to each other is both simple and efficacious, and affords the means of readily disconnecting the pieces.

A groove, *x*, is made in the face of the sole, so as to form a passage through which a current of air, caused by the revolution of the car-wheel, can constantly pass, the surface of both the wheel and sole being thus maintained in a comparatively cool state, and the accidents arising from the heating of these surfaces being consequently avoided. The groove or channel *x* also serves another important purpose. In the ordinary shoes the particles of sand and iron detached from the surfaces of the wheel and sole are apt to remain between the same and aid in cutting away the surfaces of both, whereas in my improved shoe the dust, sand, &c., escapes into the groove *x*, from which it is expelled by the current of air, the wear of the parts being thus greatly diminished.

When desirable, two or more grooves *x* may be made, and the grooves may be inclined, without departing from the main features of the invention.

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

1. The sole B, its lugs *c* and *c'* and lug *d*, in combination with the shoe A, the latter and the sole being constructed and adapted to each other so as to be secured by a simple pin, *i*, substantially as specified.

2. A groove or grooves, *x*, formed in the face of the sole, substantially in the manner and for the purpose set forth.

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

JOSEPH WOOD.

Witnesses:

CHARLES E. FOSTER,
JOHN WHITE.