

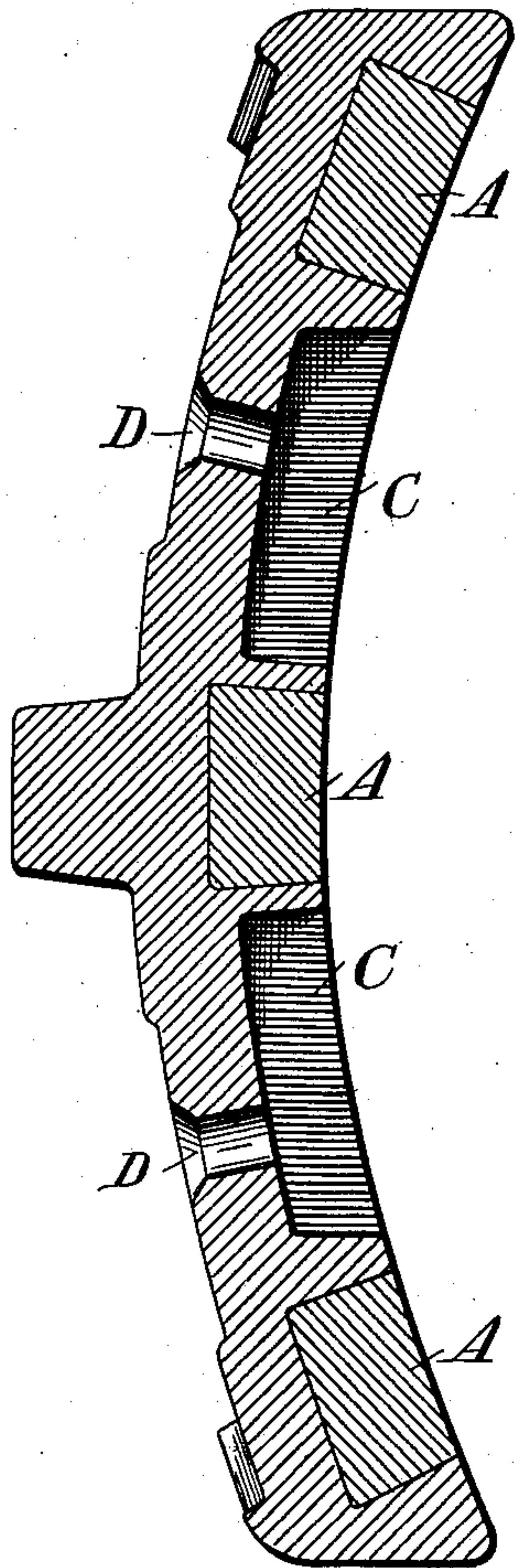
No. 737,185.

PATENTED AUG. 25, 1903.

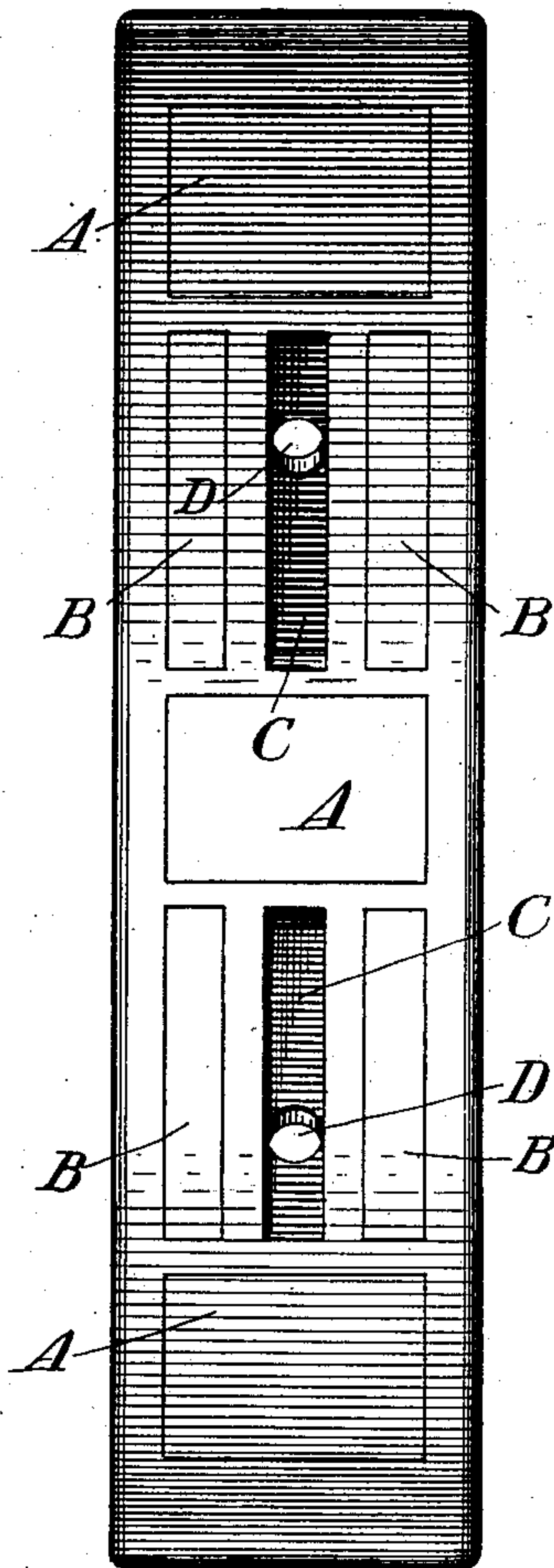
B. WILLHIDE.  
RAILWAY BRAKE SHOE.  
APPLICATION FILED FEB. 13, 1903.

NO MODEL.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*

*R. A. Balderson*  
*Alex. Scott*

*Inventor:*

*Bruce Willhide.*

*By* *Levi Abraham*  
*Att'y.*



# UNITED STATES PATENT OFFICE.

BRUCE WILLHIDE, OF GRAFTON, WEST VIRGINIA.

## RAILWAY BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 737,185, dated August 25, 1903.

Application filed February 13, 1903. Serial No. 143,274. (No model.)

*To all whom it may concern:*

Be it known that I, BRUCE WILLHIDE, a citizen of the United States, residing at Grafton, in the county of Taylor and State of West Virginia, have invented an Improvement in Brake-Shoes, of which the following is a specification.

My invention pertains to brake-shoes, and contemplates the provision of a brake-shoe embodying such a construction that the suction created by the rotation of the wheel in connection with which the shoe is used is enabled to draw sand or dust through the shoe to the face thereof, where it is calculated to materially increase the braking power of the shoe.

The invention also contemplates the provision in the face of the shoe of one or more chambers adapted to receive the air drawn in with the sand or dust, this with a view of increasing the braking power and preventing undue heating of the shoe incident to the application of the same to the wheel.

With the foregoing in mind the invention will be fully understood from the following description and claims, when taken in connection with the accompanying drawings, in which—

Figure 1 is a vertical central section of the brake-shoe constituting the preferred embodiment of my invention, and Fig. 2 a face view of the same.

Similar letters designate corresponding parts in both views of the drawings.

In the present and preferred embodiment of my invention the brake-shoe comprises a body of cast metal having longitudinal chambers C in its face at opposite sides of its middle and openings D, communicating with the said chambers and extending to the back of the body, sections A, of wrought iron, set in the face of the body at the middle and adjacent to the ends thereof, and longitudinal sections B, of wrought-iron, set in the face of the body intermediate of the middle and end sections A and at opposite sides of the chambers C. All of the several chambers and sections are by preference quadrangular in form, as illustrated. The wrought-iron sections A and B, especially when separated from each other by the metal of the body, serve to reduce the friction and conduce materially to the durability of the shoe. I do not desire, however, to be understood as confining myself to the

use of the said sections, as the shoe may be of any desired general construction without involving a departure from the scope of my invention.

My invention consists, chiefly, in the chambers C in the face of the body, preferably between the wrought-iron sections B and the openings or ducts D, extending from the back of the body to the said chambers. In virtue of the provision of the said chambers and ducts it will be observed that incident to the rotation of the wheel in connection with which the shoe is used sand will be drawn through the shoe and distributed over the face thereof—i. e., directly between the shoe and the perimeter of the wheel—where it will materially increase the braking power of the shoe. It will also be observed that air will be drawn through the shoe to the middle portion of the face thereof, where it will tend to increase the braking power of the shoe and by preventing undue heating of the shoe prolong the usefulness thereof.

Notwithstanding its advantages as pointed out in the foregoing it will be observed that my brake-shoe is very simple and inexpensive in construction and embodies no parts likely to get out of order after a short period of use.

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

1. A brake-shoe comprising a body having a chamber in the longitudinal center of its face, and a duct or opening communicating with said chamber, and adapted to conduct sand and air thereto, and sections set in the face of the body, at opposite sides of the chamber.

2. A brake-shoe comprising a body having chambers in the longitudinal center of its face, at opposite sides of its center, and ducts extending from said chambers to its back, a section set in the middle of the face of the body, sections set in the face of the body, at opposite sides of the chambers, and sections set in the face of the body, between the chambers and the ends of the body.

Signed at Grafton, in the county of Taylor and State of West Virginia, this 21st day of January, 1903.

BRUCE WILLHIDE.

Witnesses:

J. W. SAYRE,  
L. KITZMILLER.