(No Model.)

C. HERRON.

BRAKE SHOE.

No. 423,998. Patented Mar. 25, 1890.

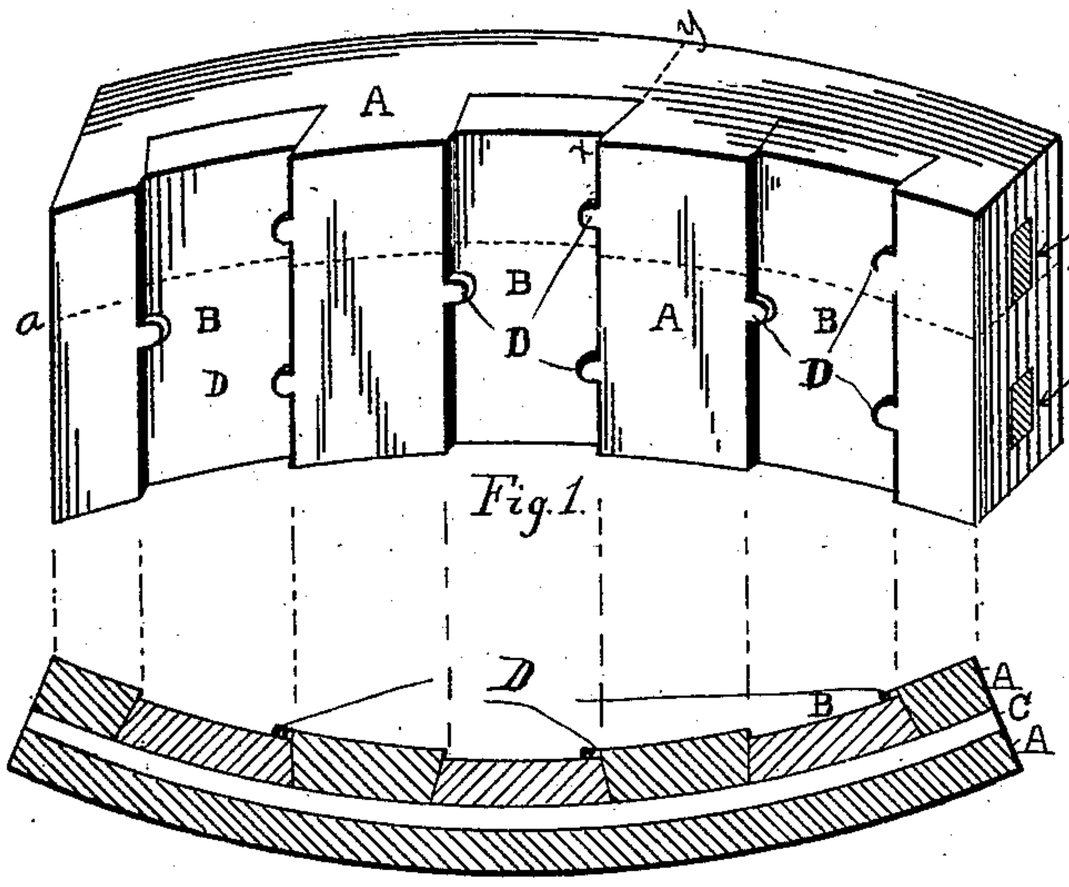

Fig. 1.

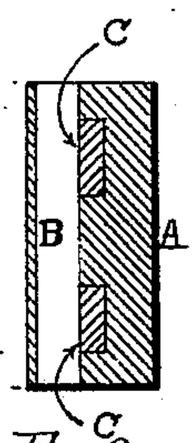

Fig. 2.

Fig. 3.

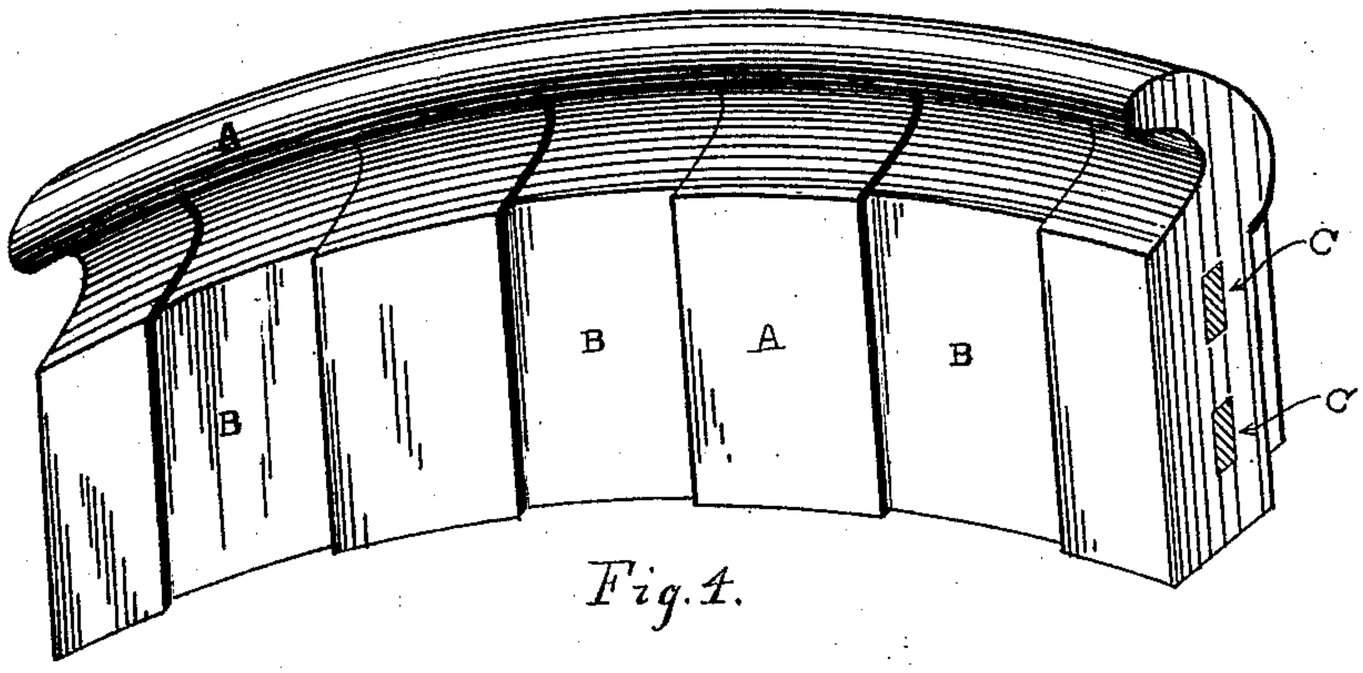

Fig. 4.

WITNESSES:

A P Wood

H Burroughs

INVENTOR

CHAS HERRON.

BY

Albert D Wood

ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES HERRON, OF CHATTANOOGA, TENNESSEE.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 423,998, dated March 25, 1890.

Application filed January 3, 1890. Serial No. 335,739. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HERRON, a citizen of the United States, and a resident of Chattanooga, in the county of Hamilton, State of Tennessee, have invented certain new and useful Improvements in Brake-Shoes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to brake-shoes, more especially relating to the class of shoes known as "composite" shoes, the object being to provide a shoe that will be strong, durable, and afford the greatest possible frictional contact with the hardened tire of the wheel and one that will fit itself to the circumferential curve of said wheel, and that will not be open to the defects heretofore found in composite shoes. The details whereby these ends are accomplished are hereinafter fully described, and the parts claimed as new pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing the contact-face and one edge and an end of the shoe. Fig. 2 is a vertical cross-section of Fig. 1 on the line *x y*. Fig. 3 is a longitudinal section on the line A B, Fig. 1, showing the cross-sectional contours. Fig. 4 is a view in perspective, showing a flange partially encircling the flange of the wheel to provide a bearing thereon and prevent lateral movement of the shoe on the face of the wheel.

In the figures like reference-marks indicate corresponding parts in the several figures.

The blocks B are of crucible steel and are of cross-sectional form, as best shown in Fig. 3, being set in the face of the main body of the shoe below the surface of said main body of said portion A an eighth to a quarter of an inch, said distance to be governed by the wearing qualities of the iron of which said part A is made, the prominence of the parts of the body A projecting above the blocks B being for the purpose of offering a surface for contact with the wheel which shall be easily worn down to the curve of the circumferential surface of the wheel and afford as soon as possible a steady bearing for the shoe on said circumferential surface. Projections D enter corresponding grooves in the hard pieces B and form a rib strengthening the shoe and obviating any possibility of lateral displacement of the parts B.

Strips or curved rods C of wrought-iron are cast into the main body of the shoe for the purpose of strengthening the entire mass, it being in such a position that any stress tending to break the shoe in cross-section will exert a pulling tension on said strip C and a crushing strain on the body of the shoe, thus applying the wrought-iron of the one and the cast-iron of the other to the exact force it is best adapted to successfully withstand. These strips may be as many in number as desired. The heavier the work to be done the more intense is the strain to be overcome or guarded against and the more strength to be supplied by these strips C.

A modification of the device is shown in Fig. 4, and consists in the application of this device to a shoe having frictional bearing on the flange of the wheel as well as on the tread, the object being to obtain a greater area of contact between tire and shoe and the differences in construction and details consisting in causing the blocks or wearing-strips B to follow the cross-sectional contour of the shoe to the fullest extent which would be effective in use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a brake-shoe, blocks of metal harder than the main body of the shoe set in the face thereof below the surface and flanges D, substantially as shown and described, and for the purpose specified.

2. In a brake-shoe, the shoe A, having blocks B of steel set in its face below the surface, and the strips C of wrought-iron, substantially as shown and described, and for the purpose specified.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

CHARLES HERRON.

Witnesses:
M. C. WEAREN,
P. A. BRAWNER, Jr.