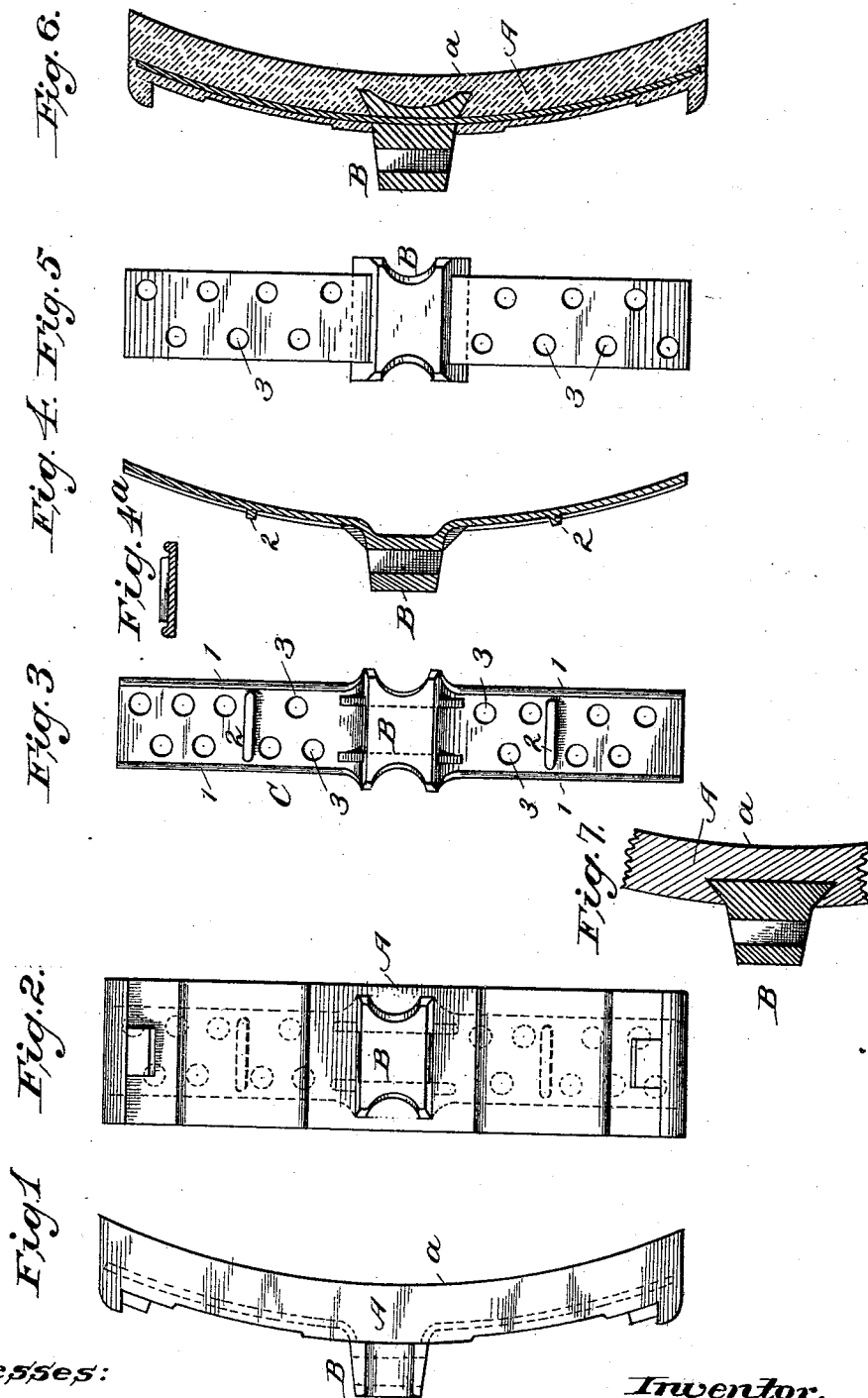


(No Model.)

H. B. ROBISCHUNG.
BRAKE SHOE.

No. 495,269.

Patented Apr. 11, 1893.



Witnesses:

E. D. Walker
Edwin L. Bradford

Inventor.

Henry B. Robischung
by F. W. Rutter
att'y

UNITED STATES PATENT OFFICE.

HENRY B. ROBISCHUNG, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO THE
CHICAGO RAILWAY EQUIPMENT COMPANY, OF CHICAGO, ILLINOIS.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 495,269, dated April 11, 1893.

Application filed December 13, 1892. Serial No. 454,998. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. ROBISCHUNG, a citizen of the United States, residing at Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Brake-Shoes; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1, is a side elevation of a brake shoe embodying my invention. Fig. 2, is a rear elevation of the same. Fig. 3, is a detached rear view of the skeleton. Fig. 4, is a longitudinal central section of the skeleton. Fig. 4^a, is a transverse section thereof. Fig. 5, is a front view of the skeleton. Fig. 6, is a longitudinal central section of a modification embracing the entire invention. Fig. 7, is a sectional detail view embracing one feature of the invention.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of brake shoes, and has for its object to render the shoe more durable and less liable to cause injury or accident in case of fracture.

Brake shoes, as is well understood, are commonly constructed of hard cast iron and are secured to the brake head by means of a perforated lug or equivalent projection on the casting and a key or equivalent device. It frequently happens that the lug or projection by which the shoe is secured is broken off either in securing the shoe to the brake head or subsequent thereto, and it commonly happens, when the shoe has become worn that owing to imperfections, or from other causes, portions of the shoe will be broken off, and in either case the falling of the shoe or its fragment is a source of danger, especially in the case of elevated tracks. To overcome these several objectionable features in the construction of brake shoes I cast the body or wearing face of the shoe, which is of hard cast metal, upon a lug (or skeleton, as the case may be) of wrought or malleable metal; said skeleton being arranged at or adjacent to the back of the shoe, the liability to fracture

being greatest when the shoe is worn past the middle thereof; and a brake shoe embodying either or both of said features embraces the main features of my invention.

There are other minor features; all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the body of the shoe having the wearing face *a*, B the lug or projection, by means of which the shoe is secured to the brake head, and C a skeleton on which the shoe is cast, which skeleton is arranged near the back of the shoe, and, if desired, may be used conjointly with the lug B, or independent thereof, and may be integral with the lug (see Fig. 4), or otherwise connected therewith (see Fig. 6), as preferred. In either event, the lug, or lug and skeleton, will be provided with means for insuring, at suitable intervals, such union between it and the body of cast metal as will prevent the detachment of any portion of the hard cast metal body, in case of fracture thereof.

Preferably both lug and skeleton are used conjointly and are in the form of a single wrought plate or casting, the skeleton section bordered by longitudinal ribs or edge beads, 1, 1, and provided with transverse ribs 2, 2, the intermediate web being perforated by a series of holes 3, 3, so arranged that the body of hard cast iron in front and rear shall be united by the portions thereof which pass through said perforations 3, 3. Some advantage will result from arranging the holes of opposite series in different transverse planes (see Figs. 3 and 5) as in such case there will be no liability of the skeleton B (if of malleable iron, or if affected by casting the body A thereon) being fractured with the body of the shoe.

It will be evident to one skilled in the art that like, though not equally good, results, may be obtained by forming the skeleton with a series of projecting beaded studs in lieu of the perforations 3, 3, but the form shown in the drawings, is deemed by me the most satisfactory way of carrying out my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

- 5 1. A brake shoe, having a fastening lug of malleable metal, and a body and wearing face of hard metal cast thereon; substantially as and for the purposes specified.
2. A brake shoe, having a fastening lug and skeleton of malleable metal, and a body and
10 wearing face of hard metal cast thereon; substantially as and for the purposes specified.
3. A brake shoe, having a perforated skeleton of malleable metal, and a body and wearing surface of hard metal cast thereon; sub-
15 stantially as and for the purposes specified.
4. A brake shoe, having a perforated skele-

ton provided with beaded edges, and a body and wearing face of hard metal cast thereon; substantially as and for the purposes specified.

5. A brake shoe, having a skeleton of mal- 20 leable metal, and a body and wearing face of hard metal cast thereon; said skeleton being at or adjacent to the back of the shoe substantially as and for the purposes specified.

In testimony whereof I affix my signature, in
25 presence of two witnesses, this 28th day of November, 1892.

HENRY B. ROBISCHUNG.

Witnesses:

E. B. LEIGH,
E. T. WALKER.