

(No Model.)

W. A. McGUIRE.
BRAKE SHOE.

No. 563,297.

Patented July 7, 1896.

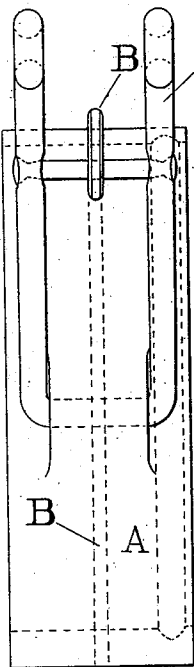


Fig. 1

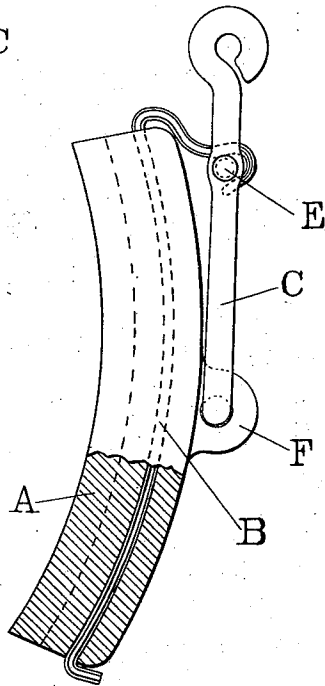


Fig. 2

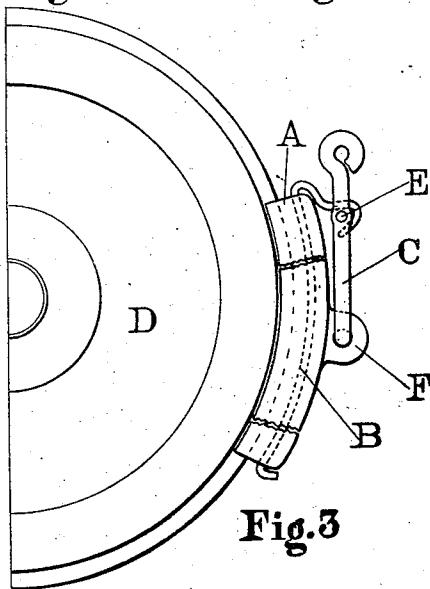


Fig. 3

WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM A. MCGUIRE, OF CHICAGO, ILLINOIS.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 563,297, dated July 7, 1896.

Application filed January 30, 1896. Serial No. 577,351. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. MCGUIRE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Brake-Shoes, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a rear elevation of a brake shoe and hanger, illustrating my improvement. Fig. 2 is a side elevation, part being in section. Fig. 3 is a side elevation of a part of a car-wheel and a broken brake-shoe, illustrating my improvement.

As is well known, the brake-shoes commonly used for railway-cars are of cast metal and in consequence are particularly liable to be broken in service, so much so that heretofore it has been customary to provide extra safety attachments of the brake-shoes to the truck, such attachments being not only expensive but being only partially effective. It is extremely necessary, however, that some means should be provided for preventing the parts of broken brake-shoes from dropping to the ground, as serious accidents have been caused by the cracking of a brake-shoe and the dropping of a piece thereof on the track under the wheel, derailing the train. On elevated railways especially it is necessary that every precaution be taken to prevent heavy pieces of material falling to the streets below.

To provide an improved brake-shoe, the construction of which will be such that the parts thereof will be prevented from falling in case of breakage, is the object of my present invention.

To this end my invention consists in providing a brake-shoe with a safety device which will retain together and support the parts of the shoe in case of breakage.

In the simplest form of my improvement it consists in forming the cast shoe with a wrought tie or safety rod which is embraced therein, extending the length of the shoe and being connected at its upper end to a suitable support, such as a brake-hanger, the lower end of the rod being deflected, enlarged, or otherwise arranged to adapt it to support the shoe should it be broken. By this construction the brake-shoe may be broken into

many pieces without danger, as all the parts of the shoe will be held together and supported by the safety-rod.

Referring to the accompanying drawings, 55 A indicates the brake-shoe.

B indicates the wrought safety-rod, which is embedded in the shoe and extends longitudinally through it, said rod being bent at its lower end to retain the lower portion of 60 the shoe upon the safety-rod in case of breakage, the upper end of such rod being provided with a hook, as illustrated in Fig. 2.

Instead of bending or deflecting the lower end of the rod, it may be enlarged or otherwise arranged to support the lower part of 65 the shoe, and I do not wish to be limited to extending it to beyond the shoe, as it may be otherwise arranged, if desired.

C indicates the brake-shoe hanger, which 70 is connected to the shoe by passing through a boss F, as shown.

D indicates a car-wheel.

E indicates a pin carried by the hanger C, as shown in Figs. 1 and 2, which pin is 75 adapted to receive the hook at the upper end of the safety-rod B. The safety-rod being connected to the pin serves to suspend or support the shoe in case of fracture of the boss F.

The shoe A may be of any suitable construction; and I wish it to be understood that I do not limit myself to a shoe of the shape 80 illustrated, nor to a safety-rod having the shape illustrated, as my invention resides, broadly, in providing a shoe with a retaining device of such form that when the shoe breaks 85 the broken parts thereof will be suspended and not permitted to slip off the retaining device; also in providing a retaining device which will serve to suspend the entire shoe in 90 case of fracture, as above described.

My invention is also especially applicable to composite shoes, as the tie-rod can be passed through the ends of the wrought pieces, thus serving to positively retain them in the 95 shoe.

I am aware that heretofore a brake-shoe has been provided with a wrought-iron rod to strengthen the shoe, and therefore I do not claim such construction taken by itself. 100

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. A brake-shoe having means for attachment to a suitable support, a safety-rod arranged in said shoe, said rod being connected to a suitable support independently of said means of attachment, and means for preventing the shoe from slipping off said rod in case of fracture, whereby the shoe may be suspended by said rod, substantially as described. 5
2. A brake-shoe having a wrought tie or safety rod arranged therein and projecting beyond the lower end thereof, and adapted to support the lower part of the shoe in case of fracture, substantially as described. 10
3. A brake-shoe having a lug for attachment to a suitable support, and a wrought tie or safety rod arranged in said shoe, said rod being connected independently of said lug to a suitable support whereby the shoe will be suspended in case of fracture, substantially as described. 15 20
4. The combination with a brake-shoe, of a longitudinally-disposed wrought piece therein, the lower end of said wrought piece being deflected to support the lower part of the brake-shoe in case of fracture, substantially as described. 25
5. The combination with a brake-shoe, of a longitudinally-disposed wrought piece therein having its lower end extending beyond the shoe and deflected to support the lower portion of the shoe in case of fracture, substantially as described. 30
6. The combination with a brake-shoe, of a longitudinally-disposed wrought piece therein, the lower end of said wrought piece being deflected, and said wrought piece being connected to a suitable support, substantially as described. 35
7. The combination with a brake-shoe, of a longitudinally-disposed wrought piece therein, one of the ends of said wrought piece extending beyond the shoe and being connected to a suitable support, substantially as described. 40

WILLIAM A. McGUIRE.

Witnesses:

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