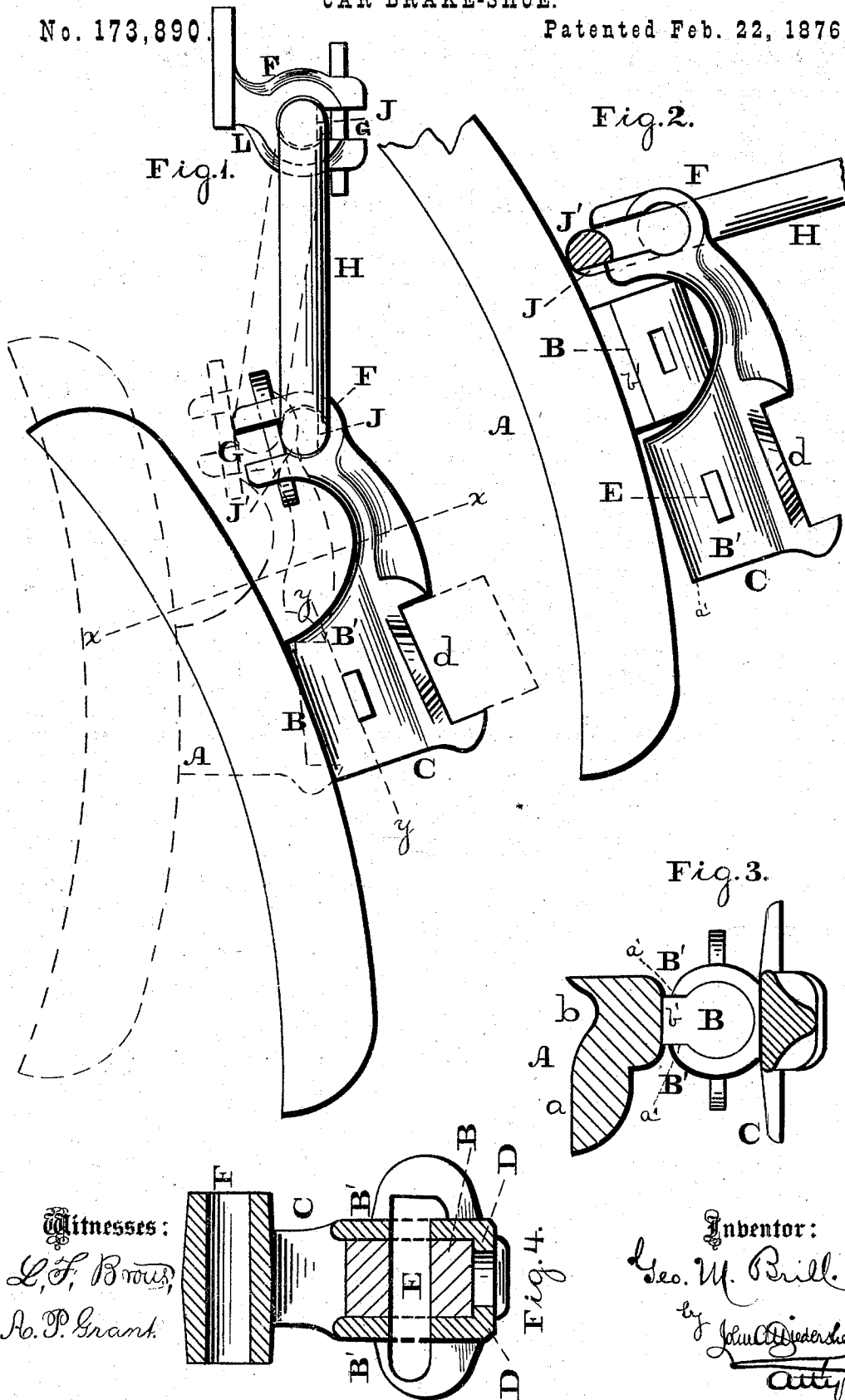


G. M. BRILL.
CAR BRAKE-SHOE.

No. 173,890.

Patented Feb. 22, 1876.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE M. BRILL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CAR-BRAKE SHOES.

Specification forming part of Letters Patent No. 173,890, dated February 22, 1876; application filed August 9, 1875.

To all whom it may concern:

Be it known that I, GEORGE M. BRILL, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Brake-Shoes; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side view of the device embodying my invention. Fig. 2 is a similar view, the parts being separated. Fig. 3 is a transverse section in line *xx*, Fig. 1. Fig. 4 is a vertical section in line *yy*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a brake-shoe, which is formed with a groove, so as to brake both against the tread and flange of the wheel, and with a vertically-extending head having a neck, a holder having a vertically-extending socket, a slot and a horizontal ledge at its bottom, and a horizontally-extending key, which passes through coincident openings in the head and socket, transversely, in the middle thereof, whereby the head, when applied to the socket, will seek its resting position on the ledge, fill the socket, and whereby it is prevented from displacement from the socket. It also consists in the hanger and the shoe-holder so constructed that the hanger may be conveniently applied to the holder, and also prevented from accidental disengagement therefrom. It also consists in a novel mode of connecting the hanger and bracket.

Referring to the drawings, A represents a brake-shoe whose face *a* is adapted to engage with the tread of the car-wheel and groove *b*, with the flange thereof. At the rear of the portion occupied by the groove *b* there is secured a head, B, which may be of cylindrical, spherical, angular, or other form, and extends in the direction of the length of the shoe. The face *a* is designed to bear against the tread of the wheel, and the groove *b* embraces the flange of the wheel, so that both tread and flange will be simultaneously pressed by the shoe, and wear away uniformly by the action

of said shoe. C represents the holder of the shoe. In the holder is formed a vertically-extending socket, B', whose inner face is of form corresponding to that of the head B, and is adapted to receive said head, and at the bottom of the socket there is a ledge or flange, D, on which the head of the shoe will be supported. The said socket B' has a vertical slot, *a'*, in front for the passage of the neck *b'* of the head B, whereby the head fills the entire socket, and the neck fills the slots, so that the shoe cannot rotate or turn. In the head and socket, at the middle thereof, there are transversely-extending openings, through which is passed a key, E, for locking said head and socket. It will be seen that the head B is readily applicable to and removable from the socket, and adaptable to the right or left hand side of the car. It is only necessary to arrange the shoe so that its groove *b* will be coincident with the flange of the wheel. Then introduce the head D into the socket B', and insert the key E, and the parts are in proper position for operation against the wheel, the brake-beam being attached to the shoe at *d* or elsewhere, in any well-known manner. It will also be seen that the head B fully occupies the socket B', and prevents the entrance of dirt into the latter. In the upper part of the holder C there is a horizontally-arranged circular eye, F, one side of which is open, as at G, the dimension of the opening in the vertical direction of the holder being less than the diameter of the eye. H represents a hanger, which consists of a frame, of which the face J of one side, J', is flattened so as to permit said side to pass the opening G of the eye F, and thus enter the eye in which it has its play, the hangers thus supporting the holder, and, consequently, the shoe, the passing of the side J' of the hanger through the opening G being accomplished by presenting the side to the opening at a right angle to the vertical direction of the holder C, as shown in Fig. 2. When the hanger and eye are properly located a key is passed through the ends of the open part of the eye, so as to prevent disengagement of the eye and hanger. It will be seen that when the brake is applied, and the shoe is in contact with the wheel, the eye F of the holder will be brought

to a horizontal position, and owing to the side J' of the hanger extending at a right angle to the holder c, said side cannot enter the opening G, and thus cause disengagement of the hanger and holder, the same provision existing during the jumping of the shoe, holder, and hanger. When, however, it is required to separate the holder and hanger the latter is turned sidewise, so that the flat face J of the side J' will be in line with the opening G of the eye F. Then draw the side out through the eye, and the parts are disconnected. The side of the hanger opposite to the side J' will also be formed with a flat face, J, for engagements with a top holder, bracket, or the support attached to the car and having an open eye, F G, similar to that in the holder C. It will also be noticed that the shoe and holder, and the holder and the hanger, may be conveniently transported, and their construction is such that they may be readily fitted in position without being specially formed rights and

lefts, and the disconnection from each other and the car may be accomplished with facility and rapidity.

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

1. The shoe A formed with a tread-face, a, and flange-embracing groove b, in combination with the vertically-extending head B, having a neck, b', and with the holder C formed with a vertically-extending socket, B', front slot a', and a horizontal ledge, D, at the bottom thereof, substantially as and for the purpose set forth.

2. The hanger H formed with a flat-faced side, J', in combination with the holder, substantially as and for the purpose set forth.

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Witnesses:

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