A. A. FREEMAN.

Car-Brake Shoe.

No. 164,081. Patented June 8, 1875.

Fig 1

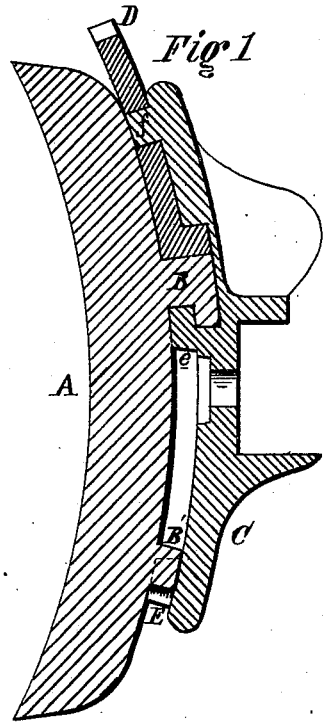


Fig 2

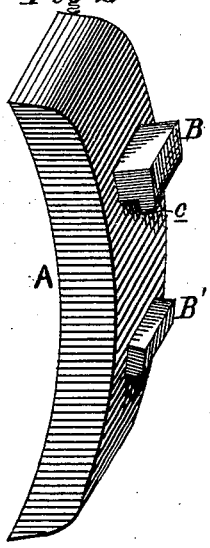


Fig 3

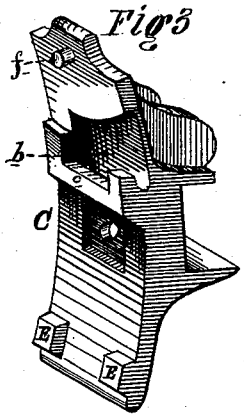


Fig 4

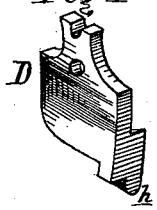
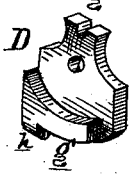


Fig 5



Witnesses.

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UNITED STATES PATENT OFFICE.

ALBERT A. FREEMAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM M. SINGERLY, OF SAME PLACE.

IMPROVEMENT IN CAR-BRAKE SHOES.

Specification forming part of Letters Patent No. **164,081**, dated June 8, 1875; application filed April 6, 1875.

To all whom it may concern:

Be it known that I, ALBERT A. FREEMAN, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Shoe for Car-Brakes, of which the following is a specification:

The object of my invention is to provide a brake-shoe in which the sole, locking device, and shoe proper are made of three simple, inexpensive castings, which are ready to put together as they leave the foundry, without drilling or fitting up.

The invention consists in forming on the back or side of the sole which is in contact with the shoe two suitable lugs, the upper one of which enters a cavity or recess in the shoe, and the lower one passes and is held between two lugs, formed at the lower part of the shoe, the two parts being locked together by a simple lever or overbalanced key, which retains a vertical position at all times and presses upon the upper lug of the sole. Simply turning or throwing this lever backward permits the sole to be readily released sidewise from the shoe.

Figure 1 is a vertical section through the center of a brake-shoe and sole with my invention applied. Fig. 2 is a perspective view of the sole; and Fig. 3, a perspective view of the shoe. Figs. 4 and 5 are perspective views of the locking-lever or overbalanced key.

A, Figs. 1 and 2, is the sole, on the back of which is formed a rectangular-shaped lug, B, the outer end of which is provided with a downward-projecting edge or rib, *c*, which acts in the capacity of a hook when the sole is in place. C, Fig. 3, is the shoe, the front side of which is formed with a cavity or recess, *b*, for the passage of the lug B, and also with a transverse projection, *e*, provided with a rectangular-shaped depression to accommodate the said lug and prevent its working out sidewise. The cavity *b* extends laterally inward from one edge of the shoe to within a short distance of the opposite edge, and extends downward back of the projection *e* and forms a socket in the rear of said projection for the reception of the rib on the lug B. A channel or groove is made at the lower part of the entrance to the cavity *b* for the passage of the rib on the lug B, and also to assist in guiding the said lug while the sole is being moved laterally inward to its position on the shoe. D, Figs. 4 and 5, is the locking-lever or overbalanced key, which is placed loosely on a pivot-pin, *f*, cast on the front side of the shoe C. The lower end of the said lever is slightly curved, and the back or side in contact with the shoe is made with a projection, *g*, which fits in and partially fills the cavity *b*. The upper edge of the projection *g* is formed with a concave to adapt it to the convex edge made at the upper part of the cavity *b*, so as to permit the lever to turn freely and at the same time close up any unnecessary openings. A small semicircular lug, *h*, is also cast on the lower edge of the lever, which passes into and closes up the groove or channel at the lower part of the entrance to the cavity *b*. The arrangements of the parts are such that they co-operate in locking one to the other—that is, the key which locks the sole is in turn locked or held in position on the pivot-pin by the sole which bears against it.

In connecting the parts together the locking-lever is placed on the pivot-pin and thrown backward, leaving the cavity open. The sole A is then passed laterally inward until the lug B is completely within the cavity. It is then dropped vertically, permitting the rib on the lug to pass into the socket made to receive it. The lug B′, cast near the lower end of the sole, at the same time passes between two lugs, E E, on the front side of the shoe. The locking-lever D is then turned and permitted to fall into its proper position, with the projection *g* in the cavity and bearing on the lug B. With the lever in this position it is impossible for the sole to move vertically or laterally. A notch is made in the upper end of the lever for the reception of a hook, to be used in throwing it backward or forward.

What I claim as my invention is—

1. The sole A, provided with the lug B, in

combination with the round shoe C, and locking-key D, substantially as and for the purpose set forth.

2. The combination of the locking-key D having projection *g* and lug *h*, with the recess *b* in the shoe, substantially as set forth.

3. The sole A, provided with the lug B and lug B′, in combination with the shoe C, recess and socket *b*, lugs E E, pivot-pin *f*, and locking-key D, substantially as set forth.

ALBERT A. FREEMAN.

Witnesses:

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