C. W. ARMBRUST.

BRAKE SHOE.

APPLICATION FILED DEC. 2, 1910.

1,010,008.

Patented Nov. 28, 1911.

2 SHEETS—SHEET 1.

Fig 4

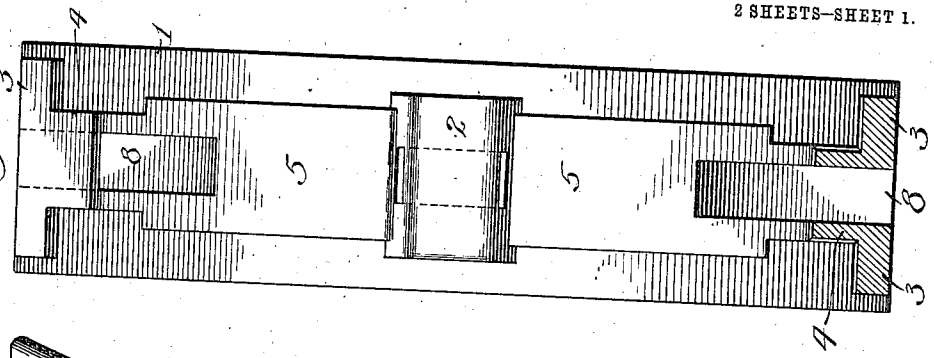


Fig 3

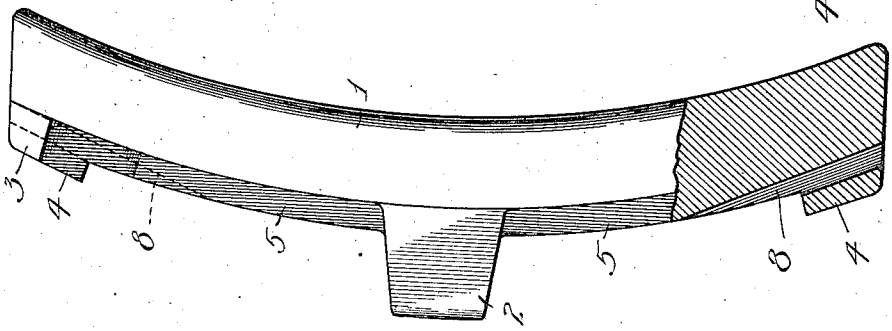


Fig 2

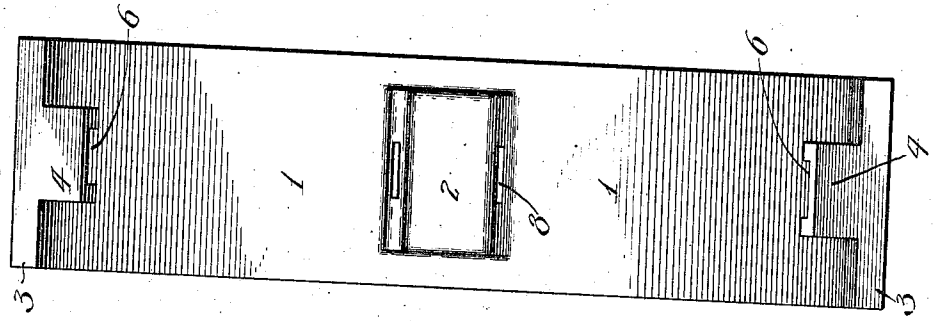
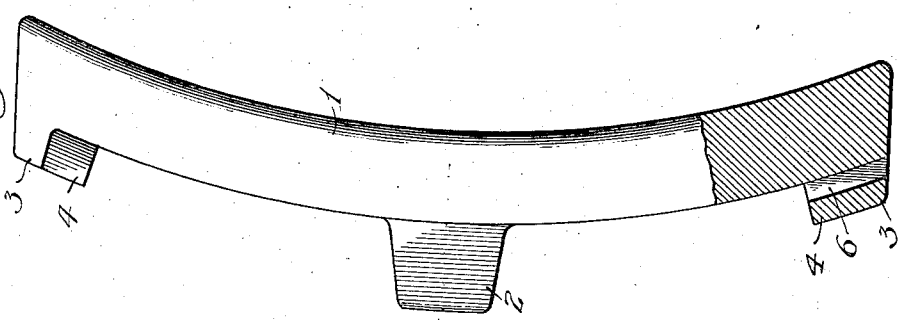


Fig 1.



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2 SHEETS—SHEET 2.

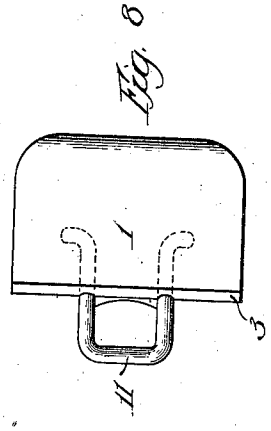

Fig. 8

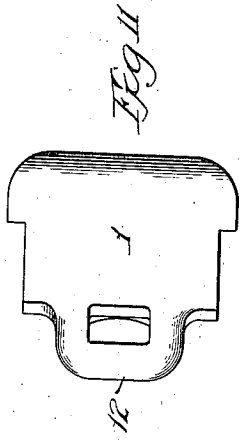

Fig. 11

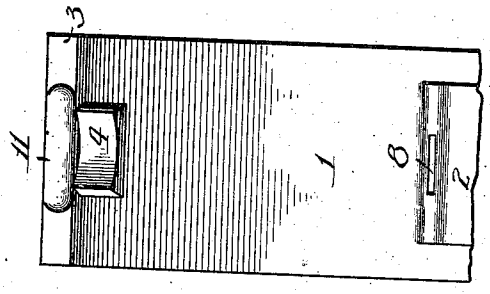

Fig. 7

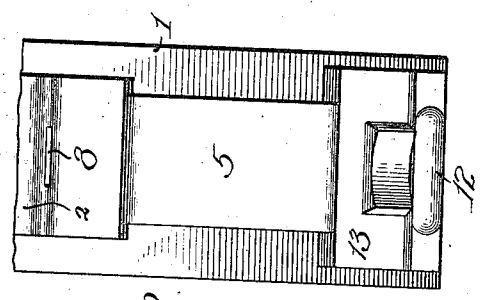

Fig. 10

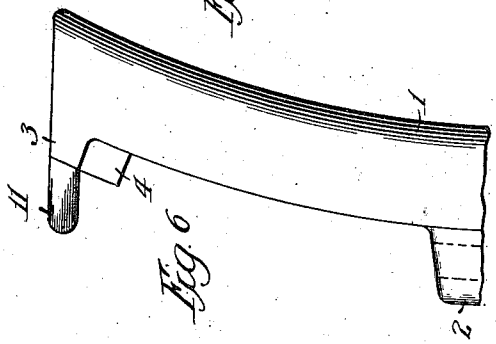

Fig. 6

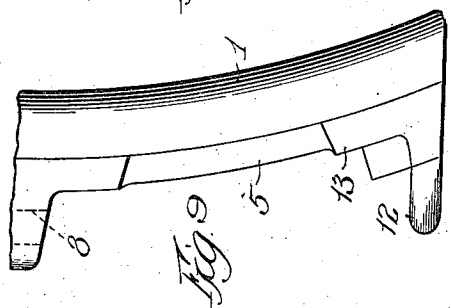

Fig. 9

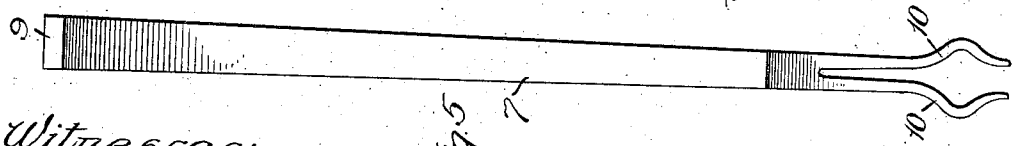

Fig. 5

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UNITED STATES PATENT OFFICE.

CHARLES W. ARMBRUST, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-FOURTH TO SYDNEY STEIN, OF CHICAGO, ILLINOIS.

BRAKE-SHOE.

1,010,008. Specification of Letters Patent. Patented Nov. 28, 1911.

Application filed December 2, 1910. Serial No. 595,184.

To all whom it may concern:

Be it known that I, CHARLES W. ARMBRUST, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Brake-Shoes, of which the following is a specification.

This invention relates to brake shoes and it can be embodied in solid cast iron or in any of the varieties of composite brake shoes.

The object of the invention is to connect the shoe at its ends as well as at its middle to the brake head by means of the key so that, in event of fracture of the shoe, the parts will be held together in proper position for engaging the wheel and will be prevented from falling on the track.

In the accompanying drawings Figure 1 is a side view, partly in section, and Fig. 2 is a back view of a common cast iron shoe embodying the invention. Fig. 3 is a side view and Fig. 4 is a back view, both partly in section, showing the invention embodied in a shoe having an integral strengthening strip. Fig. 5 shows the fastening key. Figs. 6, 7 and 8 are respectively side, back and end views of a portion of a brake shoe embodying the invention in another form. Figs. 9, 10 and 11 are similar views illustrating another embodiment of the invention.

I have shown the invention embodied only in several different forms of a solid cast iron car shoe but it will be readily understood by those skilled in the art that the invention may be embodied in composite and other car and driver shoes and in substantially the same manner and with the same desirable results.

Referring to the drawings, 1 designates the body, 2 the attaching lug, 3 the end lugs, and 4 the guide lugs of the shoe. In Figs. 1 and 2 the shoe corresponds to the most common type of solid cast iron shoe in commercial use and in Figs. 3 and 4 the shoe is provided with an integral strengthening strip 5 which extends from end to end of the shoe. In Figs. 1 and 2 I provide openings 6 which extend through the guide and end lugs to receive the key 7. In Figs. 3 and 4 the openings 8 not only extend through the guide and end lugs but also through a portion of the strengthening strip 5.

In practice the shoe is secured to the head by the key in the usual manner except that the key is seated in the openings 6 as well as in the opening 8 in the attaching lug. The key has a head 9 of suitable character at one end and its other end is provided with a pair of prongs 10 adapted to spring laterally into locking egagement with the shoe after it has been passed through one of the openings 6. Thus the shoe is connected at both ends as well as at its middle to the head and if the shoe should fracture in service the portions thereof will be retained in place on the head and prevented from falling upon the track. The broken shoe may be continued in service while the parts thereof are thus held together by the fastening key which will not only hold the parts on the head but in proper relation to each other in the case of ordinary fractures.

In Figs. 6, 7 and 8 I have shown a shoe provided at its end with a wire eye 11 to receive the ends of the key, the wire being embedded in the body of the shoe beneath the end lug. In Figs. 9, 10 and 11 I have shown an eye 12 made integral with the shoe and projecting outward from the back thereof at the end lugs to receive the ends of the key. These figures also show the strengthening strip 5 and spacing lugs 13.

In all the several forms of the invention the key is engaged with the body of the shoe at the extreme ends thereof as well as at the attaching lug midway between its ends and this is a matter of importance because the key securely fastens the ends of the shoe to the head and avoids the liability of any portion of the shoe being broken off and falling upon the track.

As indicated in the drawings my invention can be embodied in brake shoes without adding to their weight and with comparatively little additional cost.

What I claim and desire to secure by Letters Patent is:

1. A brake shoe having guide lugs to prevent relative lateral movement of the shoe on its head and openings in said guide lugs and extending into the body of the shoe to receive a fastening key.

2. A brake shoe having an integral strengthening strip at its back extending longitudinally of the shoe and openings at the end of the shoe to receive the fastening key.

3. A brake shoe having a central strength-

ening strip and provided on its back with guide lugs and end lugs located outside the guide lugs, said end lugs having perforations therethrough to receive a fastening key.

4. A brake shoe having an integral strengthening strip at its back extending longitudinally of the shoe and openings extending through the ends of said strengthening strip to receive the fastening key.

5. A brake shoe having an integral strengthening strip at its back, and end and guide lugs, and openings extending through said strengthening strip, end and guide lugs to receive the fastening key.

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