(No Model.)

FITZ WILLIAM SARGENT.

BRAKE SHOE.

No. 490,756. Patented Jan. 31, 1893.

Fig. 1.

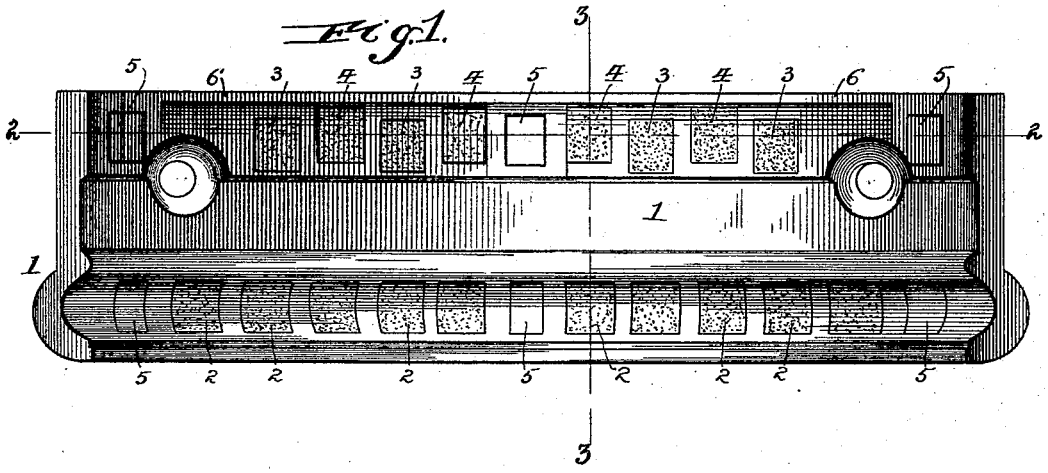


Fig. 2.

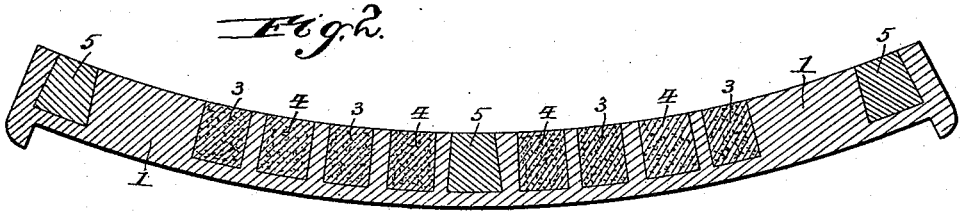
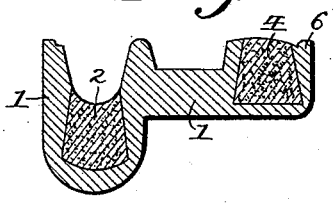


Fig. 3.



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UNITED STATES PATENT OFFICE.

FITZ WILLIAM SARGENT, OF AURORA, ASSIGNOR TO THE CONGDON BRAKE SHOE COMPANY, OF CHICAGO, ILLINOIS.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 490,756, dated January 31, 1893.

Application filed May 27, 1892. Serial No. 434,670. (No model.)

To all whom it may concern:

Be it known that I, FITZ WILLIAM SARGENT, a citizen of the United States, residing at Aurora, in the county of Kane 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.

This invention relates more particularly to power brakes, especially to the brakes of locomotives. The brake shoes used upon locomotives are ordinarily designed to as much as possible equalize the wear on the tread of the wheel, by so shaping them that they will bear on those parts of the wheel tread which are not worn by the track; but it sometimes happens that the wear of the track upon the wheel tread, will be greater than that of the brake shoe. Especially is this true in locomotives which make but little use of the brake or whose work is so heavy as to occasion considerable slipping of the wheels.

The present invention is intended to provide a shoe which will wear the wheel as much as or more than it is worn by the track, and which can be applied to wheels which are too much worn by the track and used on them until they are worn true again, and then removed, and the usual form of shoe used on them until it again becomes necessary to apply a shoe containing this invention. To this end I combine with a brake shoe of any suitable form, one or more abrading or grinding surfaces which will grind or wear the tread of the wheel when the brake is applied.

The invention consists in the devices and combinations recited in the the claims at the end hereof.

In the accompanying drawings; which represent one form of the invention: Figure 1 is a view of a brake shoe looking at the tread of the same; Fig. 2 is a longitudinal section on the line 2, 2, of Fig. 1, and Fig. 3 is a cross section on the line 3 3 of Fig. 1.

In the figures, 1 is a shoe of any suitable form. The form shown is that known as the "Ross" shoe, such as is used on locomotive engines. This shoe is commonly made of cast iron.

2 are pockets, filled with emery or corundum, or other friable grinding or abrading material, in that part of the shoe which bears on the flange of the wheel.

3 and 4 are similar pockets, similarly filled, in that part of the shoe which bears on the tread of the wheel. Between the pockets 3, 4, and the pockets 2, is a space for that part of the wheel tread which is worn by the rail, which ordinarily is left clear of wearing material. Inasmuch as the line of wear is never sharply defined, the pockets 3 and 4 which are of substantially equal dimensions, may be caused to overlap, as shown, so that there will be greater abrasion of the middle portion of that part of the wheel tread which is to be abraded by the shoe.

5 are steel blocks disposed at intervals among the abrading blocks 2, 3 and 4. The steel blocks serve several purposes; one is to prevent the rapid wear of the shoe, and another is to hold the particles of abrading material which are worn from the blocks 2, 3, 4 and cause them to act on the wheel tire. Without such steel blocks the particles of abrading material tend rather to fix themselves in the tire and the brake shoe is worn with excessive rapidity.

6 is a lip at the edge of the shoe, which serves to retain the particles of the abrading material which are ground off of the blocks, and prevent their too rapid escape from between the wheel and the brake shoe.

While the disposition of grinding surfaces shown in the drawings is specially designed to wear off only the portion of the tread which is not ordinarily in contact with the rail, it is to be understood that such grinding surfaces can be arranged anywhere upon the surface of the brake shoe and will not only serve to grind off the surplus metal from the outer portion of the tread, but may be used to grind the entire surface of the tread of the wheel thereby removing flat spots which may have been caused by sliding or inequalities in the hardness of the tire.

I claim:

1. The combination, substantially as set forth, of a brake shoe, a series of grinding or friable abrading surfaces adapted to grind the wheel, and a series of friction surfaces, as 5, to prevent too great a wear of the brake shoe, and to hold the particles which are worn

from the abrading surfaces and cause them to act on the wheel tire.

2. The combination, substantially as set forth, of a brake shoe with a series of grinding or abrading surfaces and a lip as 6, on the outer edge of said shoe to prevent a too rapid escape of the grinding particles.

3. A brake shoe composed of cast iron or like material, and having embedded therein a series of protecting blocks, as 5, and a series of grinding blocks, as 2, 3 and 4, said shoe having also a lip, as 6, on its outer edge substantially as set forth.

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Witnesses:
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