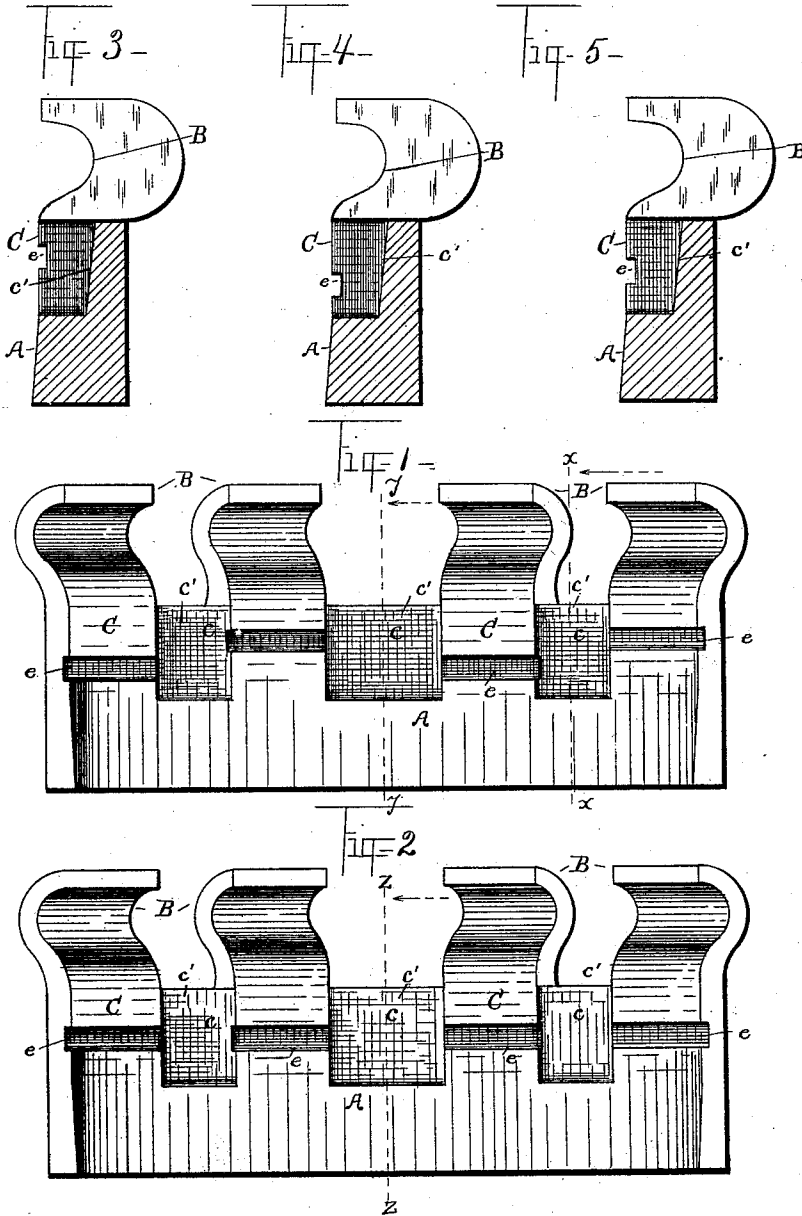


(No Model.)

C. W. ROEPPER.  
BRAKE SHOE.

No. 423,820.

Patented Mar. 18, 1890.



Witnesses  
N. H. Fay  
J. D. Fay

Inventor  
C. W. Roepper  
By his Attorney  
Thos. Hall

# UNITED STATES PATENT OFFICE.

CHARLES W. ROEPPER, OF ALLIANCE, OHIO.

## BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 423,820, dated March 18, 1890.

Application filed May 31, 1889. Serial No. 312,774. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. ROEPPER, a citizen of the United States, and a resident of Alliance, county of Stark, and State of Ohio, have invented certain new and useful Improvements in Brake-Shoes, of which the following is a specification, the principle of the invention being herein explained, and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

This form of brake-shoe is designed to do away with the longitudinal rib that is usually located between the flange-contacting portion and the inner tread-contact portion; to locate the face of the inner tread-contact portion and the inner edge of the flange-contact portion in the same transverse plane; to form the inner tread-contact portions separate and independent from each other, and, to form recesses between the two, the faces of the recesses being inclined from the outer tread-contact portions toward the openings between the several flange-contact portions, whereby the wearings and grindings caused by the contact of the shoe with the periphery of the wheel may have an opportunity, and will have a tendency, to slip outward and be discharged between the said openings of the several flange-contact portions. Again, longitudinal slots are formed in the faces of the intermediate inner tread-contact portions, whereby the wearings or grindings will have an opportunity to be discharged through said longitudinal slots, instead of collecting in one place and clogging up. In a second form of shoe the said longitudinal slots are located out of line with one another, in order that the inner tread-portion of the wheel may not be worn down unequally and irregularly.

Referring to the drawings, Figure 1 is a face view of one form of shoe. Fig. 2 is a face view of another form of shoe. Fig. 3 is a transverse sectional view taken on the dotted line  $yy$  of Fig. 1. Fig. 4 is a transverse sectional view taken on the dotted line  $xx$  of Fig. 1. Fig. 5 is a transverse sectional view taken on the dotted line  $zz$  of Fig. 2, said sectional figures all being taken in the direction indicated by the arrows.

A is the outer tread-contacting portion of the brake-shoe, and B the several independent flange-contacting portions, a space or opening being formed between said portions. Intermediate of said flange-contacting and outer tread-contacting portions are the several independent inner tread-contacting portions C, the faces of said portions and the inner edge of the flange-contact portions lying in the same transverse and contacting planes with each other, whereby the usual rib portion that engages with and has contact against the neck of the tire is done away and omitted.

Between each two of the inner tread-contact portions a recess  $c$  is formed, the face  $c'$  of each said recess being inclined outwardly from the outer tread-contacting portion toward the openings between the flange-contact portions. The faces of the independent inner tread-contacting portions are each provided with a longitudinal slot  $e$ , which connect with the recesses  $c$ . In the form of shoe shown in Fig. 2 the said slots  $e$  all lie in the same longitudinal line; but in the form shown in Fig. 1 the slots lie out of longitudinal line with each other or in different longitudinal planes, whereby no ridge or unevenness is left in the inner tread portion of the wheel, but on the contrary the said tread is worn down smoothly and equally by the inner tread-contacting surfaces conjointly covering, as they do, the entire inner tread portion of the wheel.

I designate that portion of the shoe that engages or has contact with the flange of the wheel as the "flange-contact" or "flange-contacting portion," while that portion of the shoe that is opposite to and adapted to have engagement with the inner tread portion of the wheel, which is that part of the wheel most likely to be worn down by engagement with the rail, I designate as the "inner tread-contact" portion of the shoe. The outer tread contact or contacting portion of the shoe is intended to signify that portion of the shoe lying outside of the inner tread-contact portion.

The foregoing description and accompanying drawings set forth in detail mechanism in embodiment of my invention, change may

be made therein provided the principles of construction respectively recited in the following claims are employed.

I therefore particularly point out and distinctly claim as my invention—

1. In a brake-shoe, the combination, with an outer tread-contacting portion and an inner tread-contacting portion, of a series of independent flange-contacting portions, the respective projecting inner edges of said flange-contacting portions and the face of said inner tread-contacting portion lying substantially in the same transverse plane, substantially as set forth.

2. In a brake-shoe, the combination, with an outer tread-contacting portion and a series of independent flange-contacting portions, of a series of independent inner tread-contacting portions, a recess being formed between each two consecutive inner tread-contacting portions, the inner contact-edge of said flange-contact portion and the contacting-faces of said inner tread-contacting portions lying in substantially the same plane, substantially as set forth.

3. In a brake-shoe, the combination, with a series of independent flange-contacting portions, of a series of independent inner tread-contacting portions lying in the same transverse planes and contacting with the inner edges of said flange-contact portions, a recess being formed between said tread-contact portions, the faces of said tread-contact portions provided with a longitudinal slot connecting with said recesses, substantially as set forth.

4. In a brake-shoe, a series of independent tread-contact portions, a recess being formed between each consecutive pair of said inner tread-contact portions, the faces of said recesses being formed at an incline from said outer tread-contact portion toward the inner edge of said inner tread-contact portion, substantially as set forth.

5. In a brake-shoe, the combination, with

a series of independent flange-contact portions and an outer tread-contact portion, of a series of independent inner tread-contact portions, a recess being formed between each consecutive pair of said inner tread-contact portions, the faces of said recesses formed at an incline from the outer tread-contact portion toward the openings between said flange-contact portions, substantially as set forth.

6. In a brake-shoe, the combination, with a series of independent flange-contacting portions, of a series of independent inner tread-contact portions, a recess being formed between the several pairs of the inner tread-contact portions, the faces of said tread-contact portions provided, respectively, with longitudinal slots connecting with said recesses, consecutive slots being formed out of longitudinal line with each other, substantially as set forth.

7. In a brake-shoe, a series of independent inner tread-contacting portions respectively provided with slots, recesses being formed intermediate of said portions, said slots connecting with said recesses, substantially as set forth.

8. In a brake-shoe, the combination, with a series of independent flange-contacting portions, openings being formed between the same, of a series of independent inner tread-contacting portions, recesses being formed intermediate of said latter portions, the faces of said recesses inclining toward the openings formed between the flange-contact portions, said inner tread-contact portions provided with slots connecting with said recesses, substantially as set forth.

In testimony that I claim the foregoing to be my invention, I have hereunto set my hand this 25th day of May, A. D. 1889.

CHARLES W. ROEPER.

Witnesses:

J. B. FAY,  
N. H. FAY.