

No. 668,203.

Patented Feb. 19, 1901.

E. G. NICEWANER.
CAR BRAKE.

(Application filed June 15, 1900.)

(No Model.)

Fig. 1.

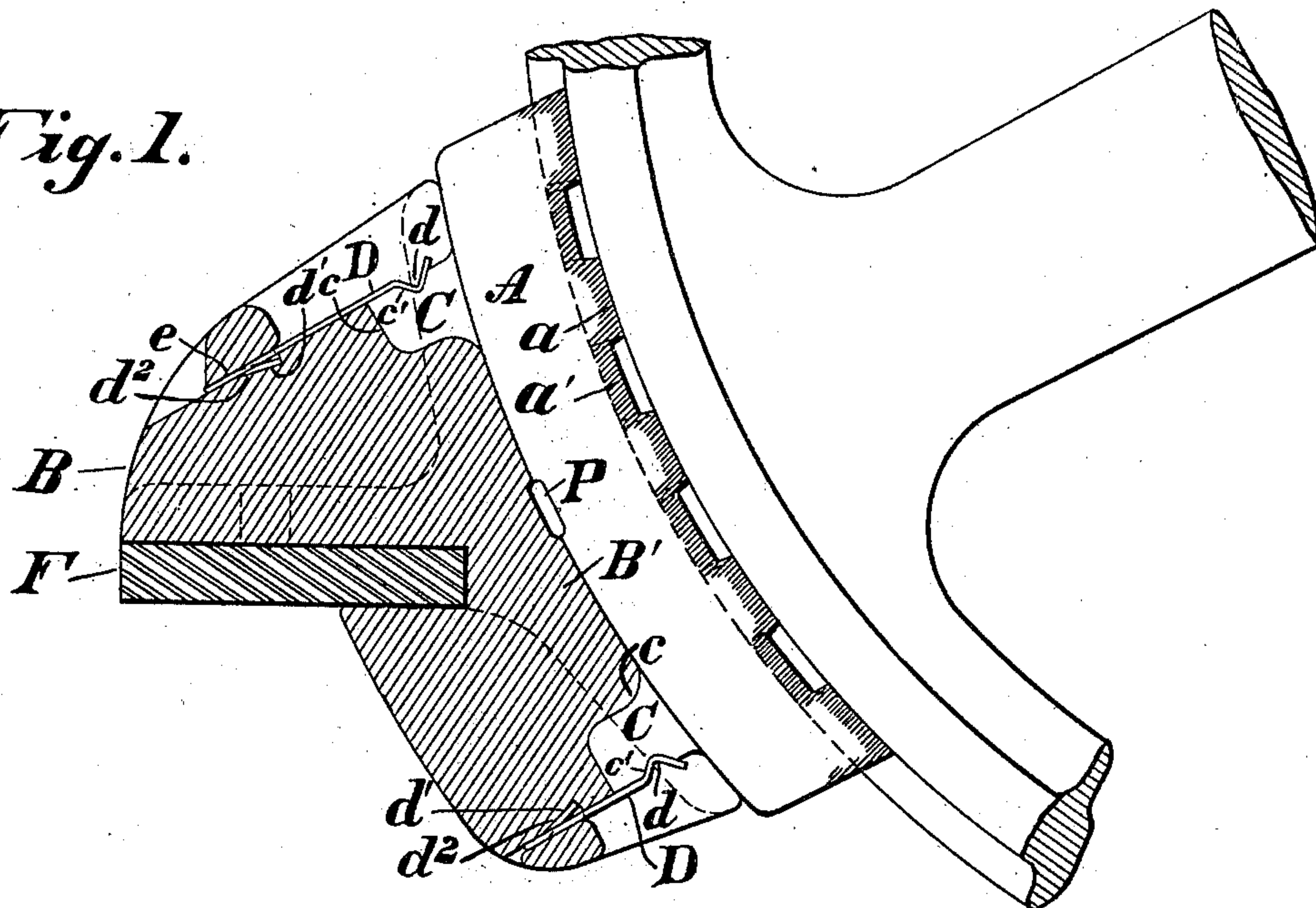


Fig. 2.

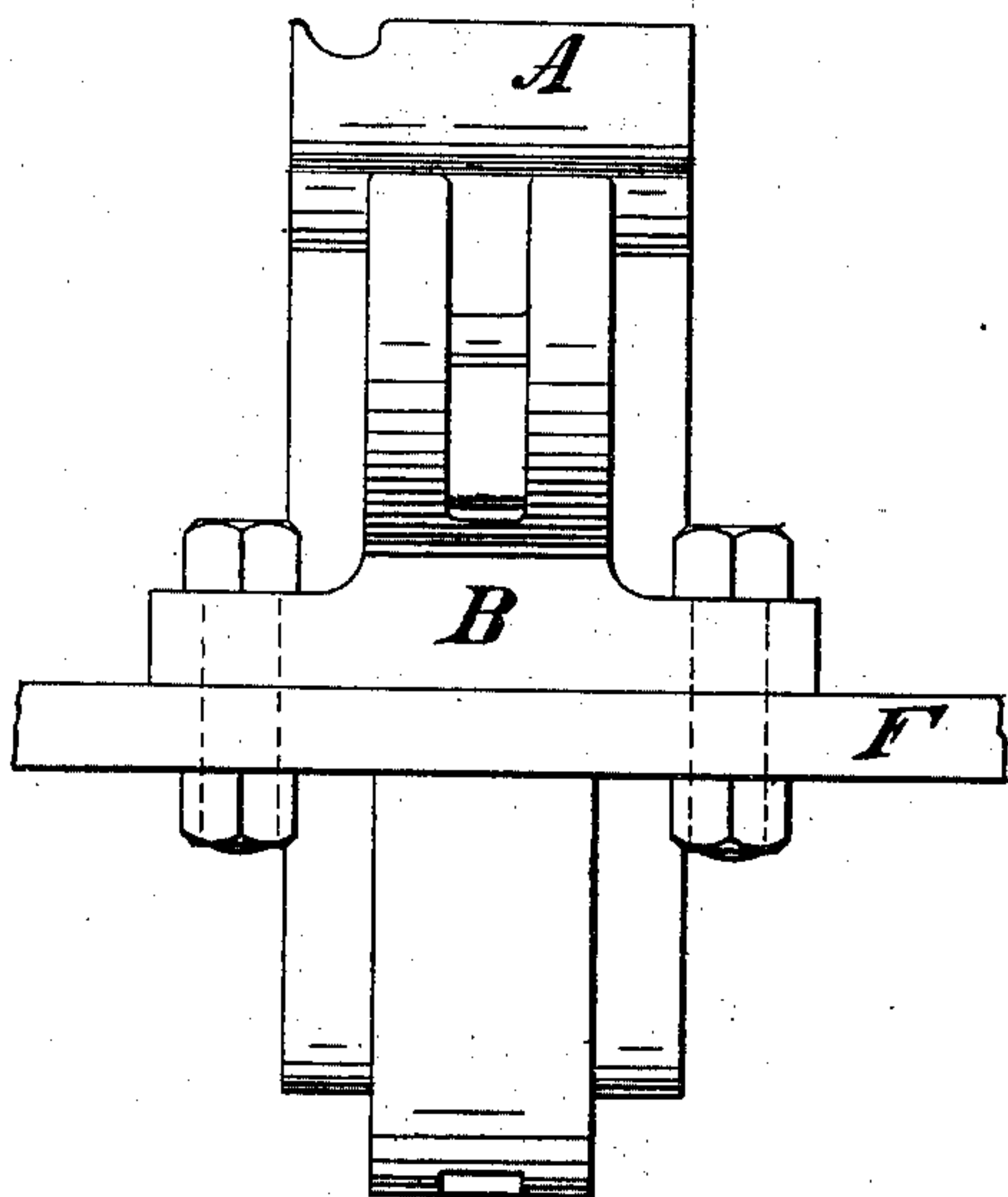


Fig. 3.



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

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CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 668,203, dated February 19, 1901.

Application filed June 15, 1900. Serial No. 20,443. (No model.)

To all whom it may concern:

Be it known that I, EDWIN G. NICEWANER, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Car-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to car-brakes, and is designed to provide a brake-shoe constructed with a wearing-face of novel character designed to preserve its braking effect notwithstanding wear and also to provide novel means for securing the same in the brake-head in a manner to prevent looseness and rattle.

With these objects in view my invention consists, first, in a shoe having its wearing-face constructed initially with chilled alternating raised and depressed portions, the chills of the raised portions terminating at about the planes of the surfaces of the depressed portions, whereby after some use the raised portions will wear down to the level of the depressed portions and will then provide a braking-surface composed of alternating sections of soft iron and chilled iron.

My invention also consists in a brake-shoe having projections on its rear side adapted to fit open seats in a brake-head, in combination with springs secured to said head and bearing upon said projections in a manner to prevent play and rattle of the shoe.

The invention also consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims, reference being had to the accompanying drawings, forming part of this specification.

In the drawings, Figure 1 is a side elevation of a brake shoe and head embodying my invention. Fig. 2 is a rear view of the same, and Fig. 3 is a detail view of one of the springs.

The letter A designates the shoe, whose braking-face is initially constructed with a series of alternating raised portions *a* and depressed portions *a'*, extending transversely across said face. The manner in which this face is chilled is indicated by the shade-lines on Fig. 1, and it will be noted that the chill

in the raised portions *a* is of such depth as to extend to about the plane of the surface of the adjacent depressed portions. After some use these raised portions, as above stated, become worn to the level of the initially-depressed portions, and there is then provided a braking-face composed of alternating soft and chilled metal. When in turn the chilled portions are worn through, there is still provided a body of soft metal, which can be worn nearly back to the head before the shoe is useless.

B designates the brake-head, which has a solid portion B', forming a backing or abutment for the central portion of the shoe, and above and below said solid portion the head is provided with open seats *c* to receive lugs or projections C on the brake-shoe. These lugs are each formed with a notch or depression *c'* to receive the bend or depression *d* of a spring-arm D, which is sprung into engagement therewith. To seat these spring-arms, the head is formed with the openings *e*, under which the arms are slipped, and the latter are provided with tongues *d'*, which engage depressions *d''* in the body portions of the head.

The body portion B' is slotted to receive the brake-beam F, and the upper portion of the head is overhung to rest on the beam. To facilitate the removal of the shoe when necessary, an opening P is provided for the insertion of a pinch-bar or other implement.

The spring-arms D are designed to hold the shoe against vertical play on the head, and such play is otherwise largely prevented by the manner in which the shoe is fitted to the head. It will be noted that the shoe is perfectly reversible end for end.

I do not wish to limit myself to the exact details of construction and arrangement herein shown and described, as these may be varied without departing from my invention, as pointed out in the appended claims.

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

1. A brake-shoe having its braking-face composed of alternating raised and depressed chilled portions, the chill on the raised portions extending to a depth about equal to the

height of said portions above the depressed portions.

2. A brake-shoe having an initially-chilled braking-face composed of alternating raised and depressed portions, the chill in said raised portions terminating at about the plane of the surfaces of the depressed portions.

3. A brake-shoe, having a braking-face composed of alternating raised and depressed portions, the metal of which is chilled to equal depths in each.

4. The combination with a brake-head having open seats at its upper and lower portions, of a brake-shoe having a central bearing or abutment against the head between the said seats, and formed with lugs or projections engaging said seats, together with spring-arms secured to the head and bearing upon the said lugs or projections.

5. The combination with a brake-head having slotted and overhung portions forming a

seat for the head on a brake-beam, and also formed with open recesses or seats at its upper and lower portions, of a brake-shoe having lugs or projections fitting said recesses or seats, and springs secured to the head and bearing upon said lugs or projections.

6. The combination with a brake-head having an abutment for the central portion of a brake-shoe, and also having an open recess or seat above and below said abutment, of a brake-shoe seated against said head and having lugs or projections fitting said recesses or seats, together with spring-arms extending into said recesses or seats and bearing upon said lugs or projections.

In testimony whereof I have affixed my signature in presence of two witnesses.

E. G. NICEWANER.

Witnesses:

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