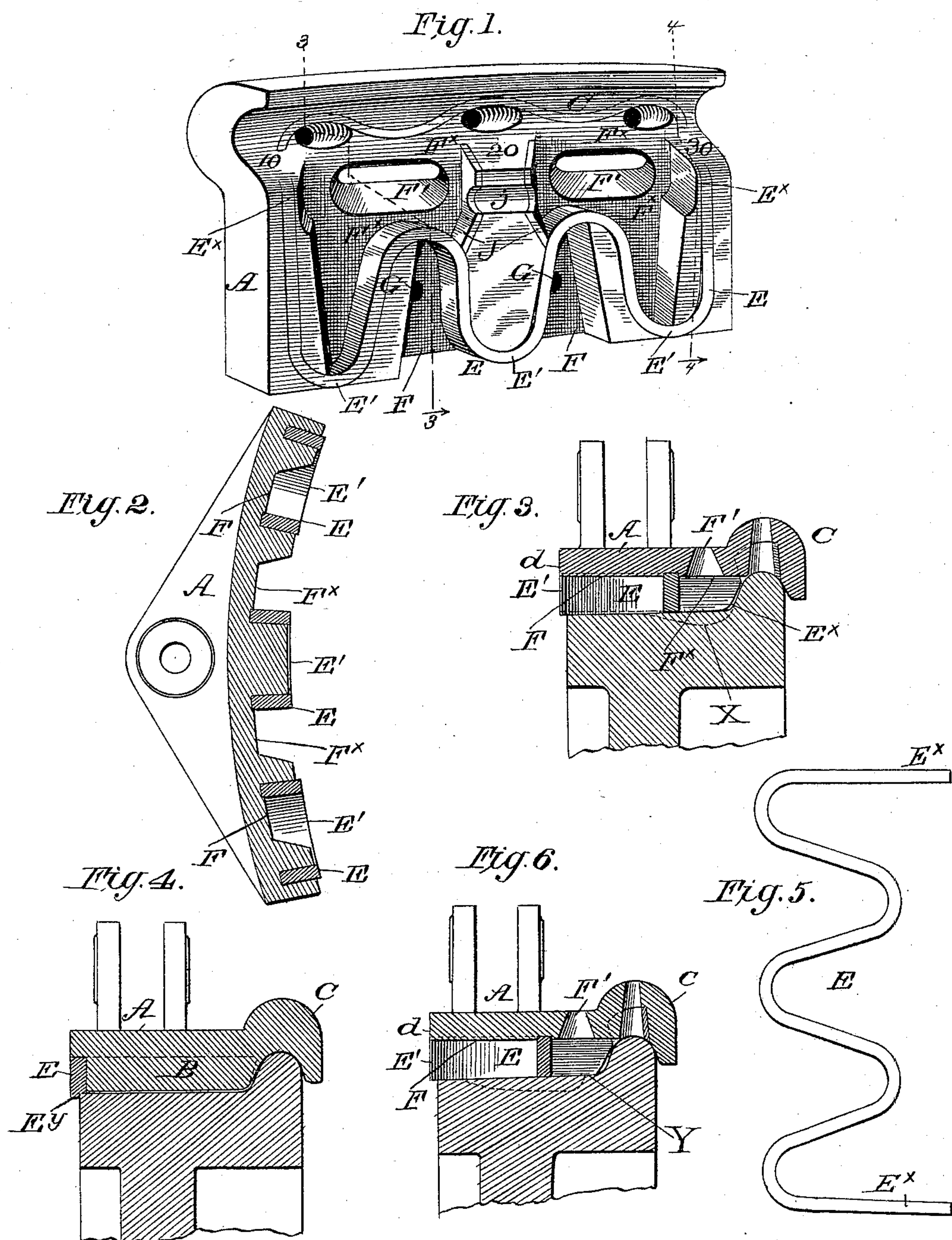


(No Model.)

J. E. WORSWICK.
BRAKE SHOE.

No. 540,203.

Patented May 28, 1895.



WITNESSES:
Fred G. Dieterich
Jos. A. Ryan

INVENTOR
James E. Worswick
BY *Mann*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES EDWARD WORSWICK, OF AMERICUS, GEORGIA.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 540,203, dated May 28, 1895.

Application filed November 10, 1894. Serial No. 528,411. (No model.)

To all whom it may concern:

Be it known that I, JAMES EDWARD WORSWICK, residing at Americus, in the county of Sumter and State of Georgia, have invented a new and Improved Car Brake-Shoe and Dresser, of which the following is a specification.

My invention relates to a combined brake shoe and dresser, for use on locomotive and car wheels, and it refers more particularly to improvements on the brake shoe disclosed in my Patent No. 528,198, bearing date October 30, 1894.

My invention primarily has for its object to provide a shoe of the kind referred to having a certain peculiar and novel arrangement of cutter members, which will serve to keep in true shape the entire wearing face of the wheel, from the throat of the flange to the outer rim, and also trim and keep the outer edge of the rim or tire in a true and proper shape.

With other objects in view which hereinafter will be referred to, the invention consists in such novel features of construction and peculiar combination of parts such as will be first described in detail and then be specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved brake-shoe and dresser. Fig. 2 is a horizontal section of the same. Fig. 3 is a transverse section of the same, taken on the line 3 3. Fig. 4 is a similar view hereinafter particularly referred to. Fig. 5 is a detail view of the sinuous cutter-plate or member, and Fig. 6 is a detail view hereinafter more fully described.

In the patent above referred to the cutter members are fitted to engage only so much of the tread face of the wheel as lies between the outer rim and the point where the trough like wear portion appears, adjacent to the throat of the flange (see Fig. 3 at X), and the space between the inner end of such cutter members is made solid to form an inner guide portion to run up against the flange of the wheel. I have found from practical experience, that, frequently as one wheel tends to run close up to the flange the other pulls away therefrom and in consequence, such lat-

ter wheel will wear out at a point inside of the throat of the flange as indicated in Fig. 6, leaving as it were a shouldered portion Y as shown. Furthermore, I have found that by making the body of the shoe solid back of the cutters, and forming a continuous guide or abutment shoulder against which the inner face of the flange of the wheel runs, the frictional contact of the said shoulder will serve to wear the inner or throat portion of the wheel flange irregular.

Referring now to the detailed construction of my present invention, A indicates the shoe, which in its general contour is similar to that shown in my patent referred to.

B indicates the tread, and C the flange bearing portion.

E indicates the hard metal or cutter member, which as shown is sinuous in shape, it being however obvious that such member may be angular or other shape. By reference to Fig. 3 it will be seen that the outer edges E' of the cutters, are flush with the outer edge of the body of the shoe, and the tread portion B of the shoe is slightly wider than the tread face of the wheel, so that, the outer portions E' of the cutters, will overlap the rim or tire of the wheel, such arrangement and construction of parts, serving to keep the edge of the rim cut true. In practice the cutting portions E' are made as the cutting member E wears away, but if desired such edge may be formed on the cutter member before the shoe is fitted onto the wheel.

The spaces between the outer faces of the sinuous cutter member are cut away to form depressions F which have openings G, for the escape of the cuttings or refuse matter which may gather therein. At the inner face of the cutter member E, the body of the shoe is recessed or cut away, except at the points 10, 20, 30 (see Fig. 1) flush with the base of flange groove C as shown at F^x F^x, and such recessed portions have elongated openings F' F', for the escape of refuse and cuttings, and also to provide for the entrance of air into the recesses F^x F^x. By thus recessing the shoe it will be observed, that while ample means are provided, by the members 10, 20, and 30 to hold the shoe true on the flange and tread portion of the wheel, frictional wear against the inner edge of the flange is reduced to a mini-

mum, and at the same time spaces are provided in which air can circulate to cool the cutter and the tread face of the wheel.

To provide for cutting away the shouldered portion Y which forms at the throat of the flange, (see Fig. 6) the end portions of the cutters E are extended entirely across the bearing face of the shoe as at E^x, the ends thereof being curved and merged into the body of the shoe as shown. By extending the cutter members entirely across the tread face of the wheel it is manifest that such face will be thereby kept trimmed down to a proper shape, it being also manifest that as only the end members of the cutters are thus extended, the main portion of the tread face of the wheel which receives the least wear will receive the major portion of the cutting face of the hard metal portion E.

In addition to the end cutter members E^x, intermediate cutter plates J, may be employed for keeping the flange and face of the wheel in proper shape, and such plates have cut out portions j, so as not to come in contact with that part of the wheel that is worn away by running on the rail.

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

1. A car brake shoe having a body formed of a soft metal, and having transverse cutting or dressing faces of harder material, extended flush with the outer face of the shoe, said shoe being of a greater width than the tread face of the wheel whereby the outer edge of the cutting faces will overlap the rim of the wheel, substantially as shown and for the purposes described.

2. A car brake shoe comprising a body portion formed of soft metal, and transverse cutting portions of a harder material, having their outer ends formed with outwardly extending flange portions, adapted to fit over the rim of the wheel when the shoe is pressed thereagainst, substantially as and for the purposes described.

3. A car wheel brake shoe, formed of a body portion having its bearing face curved to fit

over the flange of the wheel, said bearing face having cutter members of a harder material than the body, said cutter members having parts thereof extended to the flange curve to cut up to the throat of the flange as hereinbefore described.

4. A car wheel brakeshoe formed of a body portion of a soft metal, said body having a wheel flange bearing edge and transverse cutter members of a harder material, said members having portions extended out to the flange bearing edge of the shoe as and for purposes specified.

5. A car wheel brake shoe and dresser, comprising a body portion of a soft metal formed with a flange bearing member, a series of cutting members of a harder material extended transversely partially over the tread face of the shoe, and similar cutting members extending from the inner ends of such cutters to the flange bearing portion as hereinbefore described.

6. A car wheel brake shoe and dresser comprising a body of a soft metal, having a flange bearing portion, and a sinuous cutting member of a harder material than the body having end portions extended beyond the intermediate portions, to the flange throat bearing portion of the shoe substantially as shown and for the purposes described.

7. An improved car wheel brake shoe consisting of a body portion having a flange bearing portion, a series of transverse cutting faces of a harder material than the body extended transversely partially over the bearing face of the shoe, said shoe having end bearing members 10, 20, and 30, extended out flush with the bottom of the body portion, and recesses or depressions between such bearing portions, having their bottoms flush with the base of the flange bearing portion of the shoe, said recesses having openings all arranged substantially as shown and for the purposes described.

JAMES EDWARD WORSWICK.

Witnesses:

W. H. MACALISTER,

WM. ARGUE.