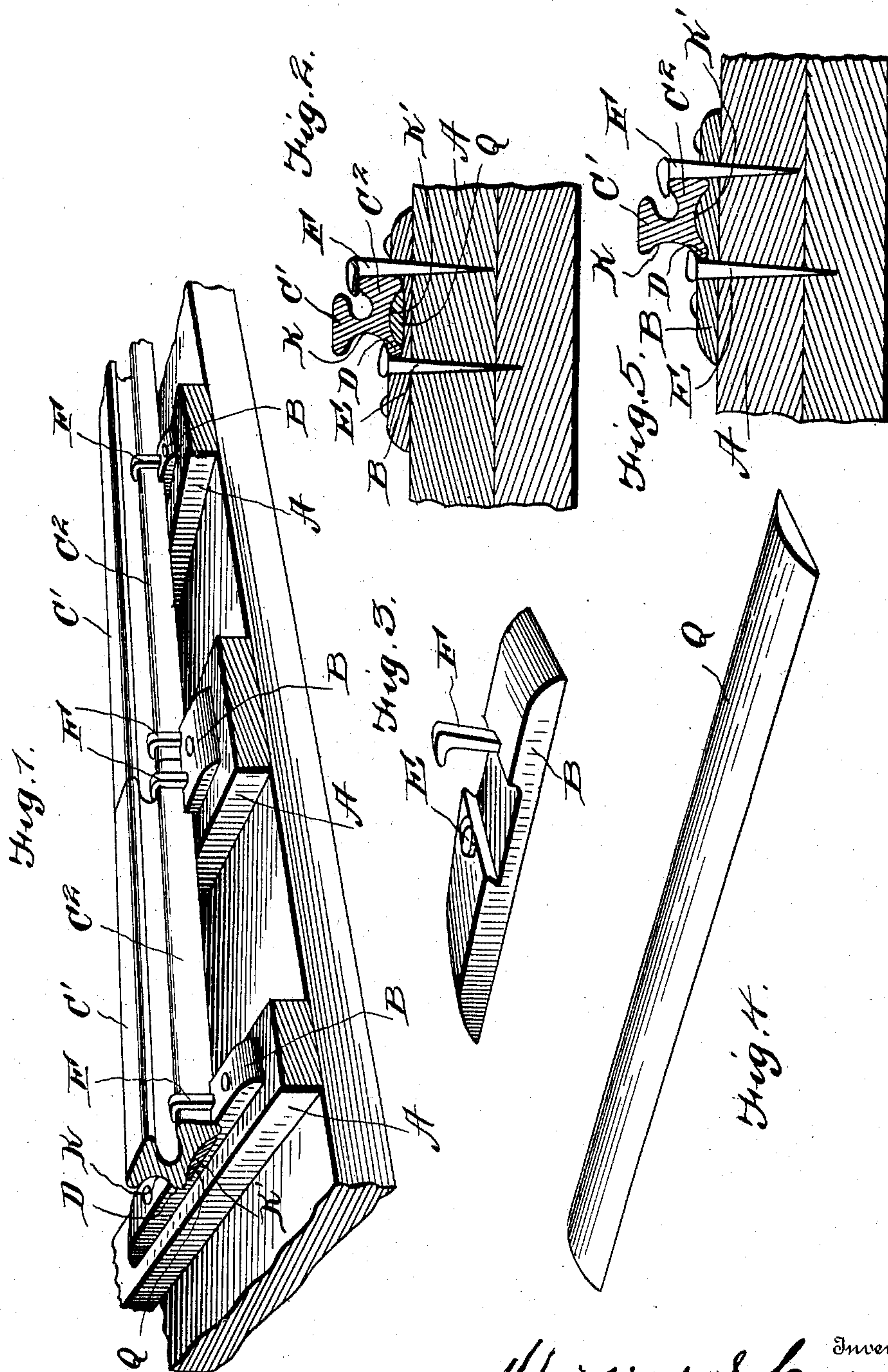


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PATENTED MAY 17, 1904.

W. S. CORPMAN.
REVERSIBLE RAILWAY RAIL.
APPLICATION FILED JAN. 9, 1904.

NO MODEL.



Witnesses

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REVERSIBLE RAILWAY-RAIL.

SPECIFICATION forming part of Letters Patent No. 759,969, dated May 17, 1904.

Application filed January 9, 1904. Serial No. 138,380. (No model.)

To all whom it may concern:

Be it known that I, WINFIELD SCOTT CORPMAN, a citizen of the United States, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Reversible Railway-Rails; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in railway-rails; and the object of the invention is to produce a reversible or double-tread rail which will extend the usefulness of the rails without greatly adding to the weight of the metal in the rails.

More specifically, my invention consists in a reversible rail for railways of various kinds having two tread-surfaces at right angles to each other, with concaved web portions which are adapted to rest upon convexed portions supported by the ties, thereby increasing the contact-surface of the under face of the rail, and consequently increasing the bracing of the rail.

My invention consists, further, in various details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings similar letters of reference indicate like parts in the views, in which—

Figure 1 is a perspective view of a rail made in accordance with my invention and shown as secured to bed-plates mounted upon ties. Fig. 2 is a cross-sectional view through the rail and the bed-plate and tie to which it is held. Fig. 3 is a detail view of one of the bed-plates. Fig. 4 is a detail of a convexed bar which is supported by the bed-plates upon the ties. Fig. 5 is a sectional view

through the rail and a slightly-modified form of the plate.

Reference now being had to the details of the drawings by letter, A A designate a series of ties, which may be of any suitable material, preferably wood or metal, and B designates metallic bed-plates, which in case the ties are made of metal are bolted to the same or made integral with the ties. If the wooden ties are employed, the bed-plates may be fastened thereto by means of spikes or bolts or other suitable fastening devices. Each of the bed-plates has a recess upon its outer face, the bottom wall of which is convexed, and C designates one of my improved reversible rails, which have two tread-surfaces C' and C'', the faces of which are at right angles to each other. Each rail has a flange D, which is adapted to rest in said recess in the bed-plate adjacent to the side wall thereof, while the opposite wall of the recess is engaged by the flanged or flaring portion of the tread-surface of the rail, which is vertically disposed. Spikes E are provided, which are driven through an aperture in the bed-plate and into the tie beneath, and the angled ends of said spikes are designed to engage the flange D, as shown clearly in the drawings, while spikes F are passed through the bed-plates and into the ties adjacent to the outer marginal edge of each bed-plate, and the hooked portions of the spikes F are adapted to engage over the vertically-disposed edge of the tread-surface of the rail. It will be observed that there are two concaved faces to the reversible rails, designated in the drawings by letters K and K', and adapted to conform to and rest over the convexed bottoms of the recesses in the bed-plates. In order to provide means for holding the rail steady, I employ bars Q, which are flat upon their under faces and convexed on their upper faces, as shown in the detail view of the drawings. These bars are adapted to rest in the recesses in the bed-plates and to extend intermediate the ties for the purpose of affording a contact-surface for the rail its entire length upon its under face. When this bar is used, the bottom wall of each recess may be flat or the under surface of the

bar may be concaved in order to fit over the convexed surface of the bottom of each recess.

In reversing my improved rail the latter is
5 turned endwise and inserted in the bed-plates, so that the tread-surface which is not in use and vertically disposed will face toward the outer ends of the ties.

By the provision of the vertical tread portion of the rail, as shown in the drawings, with one edge resting upon the bed-plates, the rail is greatly strengthened and enabled to withstand excessive strain which comes upon the portion of the rail which rests upon the
15 bed-plates while a heavy train is passing over the railway. It will be observed that the larger part of the body portion of the rail is thus utilized for reinforcing and strengthening the rail, whereas upon ordinary rails all
20 of the strain is thrown upon a narrow flange, which is held, by means of bolts, to the ties or bed-plates.

By the provision of a reversible rail made in accordance with my invention it will be observed that practically twice the use may be
25 secured out of a rail without the addition of double the weight of metal, thus materially lengthening the life of the rails and affording a great economy in the use of the metal of
30 which the rails are made.

While I have shown a particular detailed construction of apparatus embodying my invention, it will be understood that I may make alterations as to certain details of construction, if desired, without in any way departing
35 from the spirit of the invention.

I am aware that reversible rails are old in the art, and hence I do not claim, broadly, such a construction.

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

1. In combination with a plate having a recess therein, a convex rail-supporting surface intermediate the side walls of said recess, a
45 tie to which the same is fastened, a reversible double-tread rail, the outer edge of each tread and the outer face of each web, forming a continuous concaved surface adapted to rest with its entire area against said convexed bot-
50 tom of the recess, and spikes passing through said plate and in contact with the vertical face of one of the tread-surfaces of the rail and having a head engaging over the edge of the tread, as set forth. 55

2. In combination with a plate having a recess with a convexed bottom, a tie to which the same is fastened, a reversible double-tread rail, the outer edge of each tread and the outer face of each web, forming a continuous
60 concaved surface adapted to rest with its entire area against said convexed bottom of the recess, a headed spike passing through said plate and having a vertical edge in contact with the vertically-disposed tread-surface of
65 the rail, as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

WINFIELD SCOTT CORPMAN.

Witnesses:

A. L. HOUGH,
FRANKLIN H. HOUGH.